DECEMBER 24, 1951 NEWS ISSUE

Electrical World

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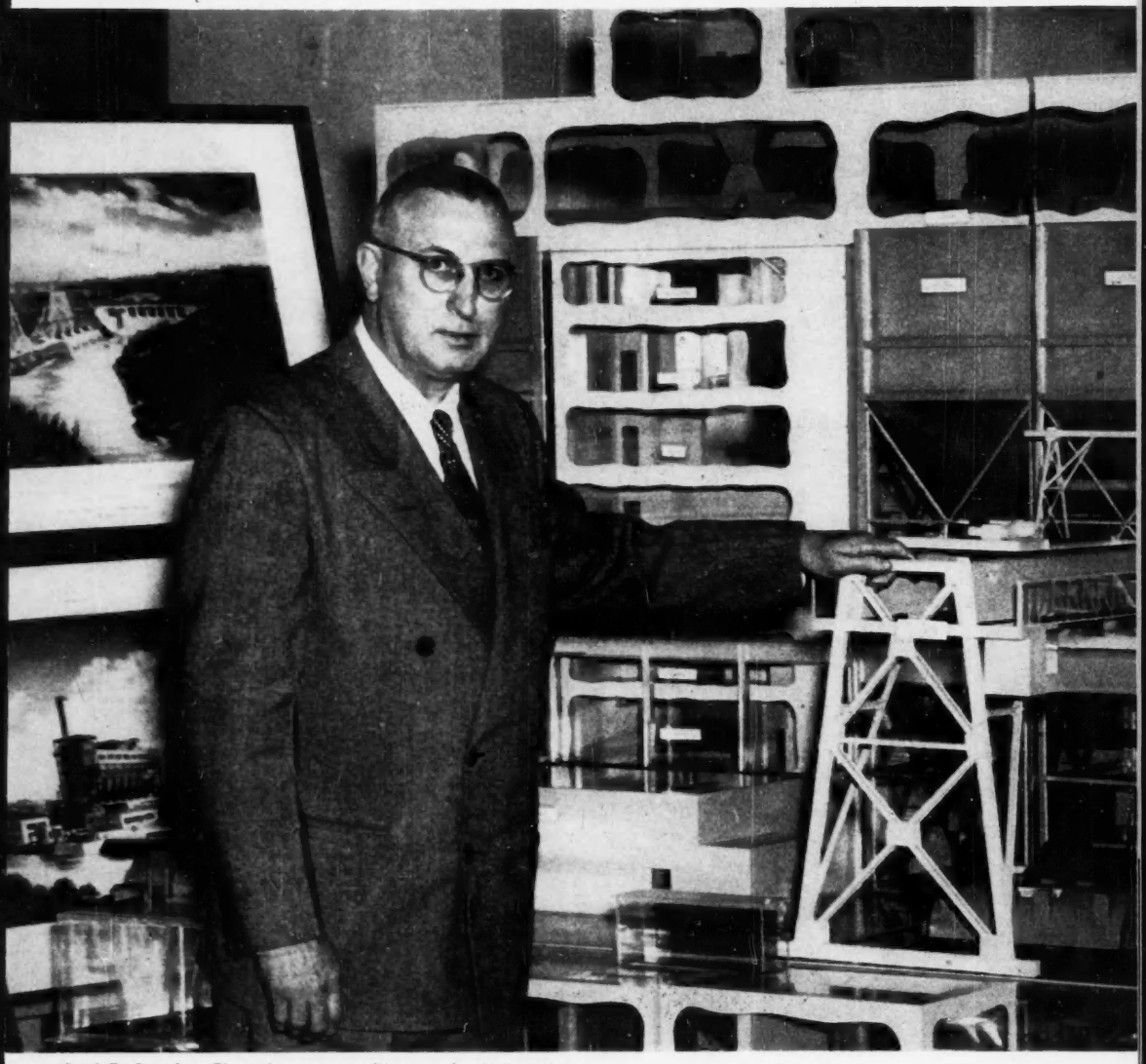

Paul E. Gourdon, Ebasco's new consulting mechanical engineer

A Christmas Prayer for Peace in Light ..Page 16

Construction Costs in 1952 .....Page 30

"New World Home" sets pattern for 24,000 kw-hr annual load!

Use	Kwhr/Yr.	*Annual Cost	Daily Cost
Lighting, Misc. Appl.	1,200	$19.20	5.3c
Cooking	1,200	19.20	5.3c
Refrigeration	960	15.60	4.3c
Electric Sink	180	3.00	0.8c
Television, Radio	420	6.60	1.8c
Laundry	900	14.40	3.9c
Heat Pump	13,980	225.60	61.8c
Sub Total	18,840	$303.60	83.2c
Water Heaters	5,160	44.40	12.1c
Total	24,000	$348.00	95.3c

* Estimates based on Union Electric Co. rates.

DESIGN FOR ALL-ELECTRIC LIVING—St. Louis New World Home highlights latest electrical equipment, from remote control wiring to new heat pumps that provide year-round air conditioning.

Dollar a day for complete electric service compares with fuel, light and power costs of conventional homes

With winter heating and summer cooling added to complete labor-saving electric equipment, what will tomorrow's consumer pay to operate an all-electric home? The question has already been answered in the New World Home, exhibited in St. Louis.

Sponsored jointly by Builder John C. Gross, Union Electric Company, Lammerts of St. Louis and General Electric, this home will provide complete electrical service—including the operation of two 3-hp heat pumps—for less than $1 a day.

No impractical dream, the New World Home is one that can be built now, with equipment already available. It is within the reach of thousands of American families. With an annual consumption of 24,000 kw-hr—more than 13 times the 1950 national residential average—the New World Home is not only an example of modern electrical living at its best; it is also an indication of the tremendous opportunities that lie ahead in residential load building. General Electric Company, Schenectady 5, N. Y.

"LIGHT CONDITIONING" of living room provides both excellent level of illumination and dramatic effects of wall-to-wall valance. Lammerts of St. Louis furnished modern, functional furniture.

MORE POWER TO AMERICA

GENERAL ELECTRIC

301-182

COMBINATION KITCHEN AND LAUNDRY includes automatic range, refrigerator, electric sink with Disposall and dishwasher, freezer, automatic clothes washer, dryer, and ironer. Total consumption is estimated at 3240 kw-hr annually.

MODEL YR-30 HEAT PUMP is a major load builder, equalling 7 to 10 ranges for average home. Shown with heat pump are G. F. Maughmer (G. E.), Union Electric Co. President J. W. McAfee, and Residential Sales Manager R. L. Coe.

NOVEL FEATURE is soda fountain and snack bar, being discussed by Miss Laura Alkire of Consumers Institute and J. R. Brownback, G-E Appliance Div. A limited supply of New World Home booklets is available from Union Electric Co. Rm 629, St. Louis, Mo.

The Electrical Week

INDUSTRY MOBILIZATION (Page 14)—Wage increase of 15¢ an hour sets pattern for non-ferrous industry . . . Depa survey indicates power supply will be tight . . . Anaconda Copper and the Interior Department are negotiating a contract for power to operate the proposed Anaconda-Harvey aluminum plant at Kalispell, Mont. . . . New Depa directory lists officials, their office numbers, and telephone extensions.

WASHINGTON—Ten utilities operating in Missouri skirmish with federal agencies in District Court over REA steam plants (p 6) . . . Changes in capacity reported to FPC are listed on Page 11 . . . Interior approves labor agreement between USBR and Colorado River Power Trades Council (p 12).

ELSEWHERE—Pouring begins at Washington Water Power's Cabinet Gorge Project (p 4) . . . Selling still held to be chief concern of food service equipment makers (p 11) . . . EEI Prime Movers Committee is told large units are the most economical (p 13) . . . Construction costs in 1952 are considered on Page 30.

• • •

WASHINGTON—*Public power advocates here are betting American P&L Pres Howard Aller will meet the Jan. 1 deadline in cooking up a deal whereby Washington State PUD's will offer to buy Washington Water Power stock now held by American . . . William S. Schmidt, on leave from Monongahela Power Co, will head the newly created scheduling-expediting section of NPA's Electrical Equipment Division (EW, Dec. 17, p 79) . . . Of the 4.5 million lb of covered aluminum conductor alloted utilities in the present quarter, Depa estimates 65% is being used for service drops and 30% for secondary lines . . . U. S. participation in building the St. Lawrence seaway project will get another boost from President Truman in his State of the Union message, seaway advocates say . . . Morehouse Committee report goes to NPA-DPA Administration Manly Fleischmann the day before Xmas . . . Lack of materials will force manufacturers of power and distribution transformers to operate plants at 65% of capacity during the first quarter and will further lengthen delivery schedules.*

First apartment building in Ohio to be heated electrically is being erected in Cleveland. It will have 500 glass radiant heating panels.

Alabama Power Co and Bureau of Mines will sponsor first international conference on underground gasification of coal, Jan. 28-30, at Birmingham.

Three-month iron and steel scrap drive by Westinghouse Electric nets 11 million lb.

Memphis Light, Gas and Water Division is considering erecting $83-million, 400,000-kw generating plant to take care of the city's future needs, Pres Thomas H. Allen announces. "Either we build it or TVA builds it, or we both build it," he adds.

Effective Jan. 1, Wakefield (Mass.) municipal system will cut 10-day discount for bill payments to 5 mills from 1¢ per kwhr for residential consumers.

Seven Washington PUD's, planning to buy Puget Sound P&L's remaining electric properties for $96.8 million, have organized a seven-man committee headed by Harvey Benson, Skagit County PUD commissioner, as chairman.

Output for week ended Dec. 15 hit a record of 7,666,864,000 kwhr compared with previous high of 7,475,693,000 kwhr for week ended Dec. 1.

First Boston Corp has arranged direct placement of $5,250,000 Kansas P&L 1st mtg bonds, 3¼% due 1981 . . . Consumers Power Co, Jackson, Mich., sells to City of Reading for a token payment of $1 the last of municipal water systems it once operated.

Congratulations—Pacific G&E elects Walter Dreyer vice president and chief engineer succeeding I. C. Steele . . . Portland General Electric elects Ralph H. Millsap and Frank A. Bosch vice presidents . . . Roy Benson, display manager of Georgia Power, wins first prize in "TV Touchdown" contest for window displays promoting Westinghouse Electric sponsorship of National Collegiate Atheletic Association football games this fall.

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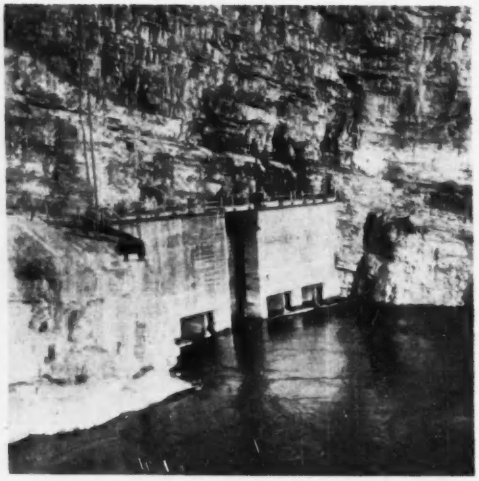
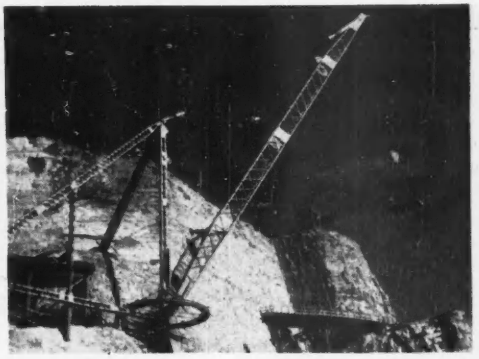
ONLOOKERS take in general view of Washington Water Power Co's 200,000-kw Cabinet Gorge hydro project on Clark River in Idaho. Concrete pouring for the 170-ft dam got underway this month. First unit goes into operation in September 1952

WORKMEN are busy operating a giant pumping unit to unwater channel which had been blocked up by rock-filled cofferdams



TWIN DIVERSION TUNNELS were constructed to carry swift river along new path. Each tunnel is 29 ft wide 1,000 ft long

POWERHOUSE SITE has been carved out of bluff above river. Excavation work is complete and foundation pouring has begun



STIFFLEG CRANE will be used to lower erection materials for powerhouse from trucks on platform to powerhouse level below

Boosting Northwest Power Supply

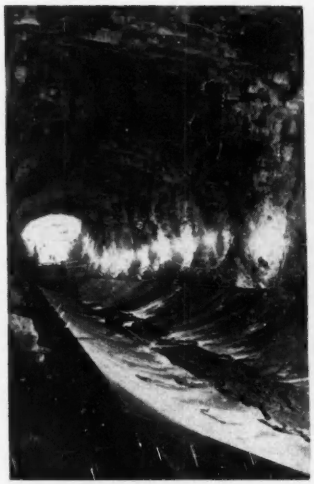
Washington Water Power Co begins concrete pouring at Cabinet Gorge; 200,000 kw scheduled to go on line by next December

If work proceeds on schedule at Washington Water Power Co's $40-million Cabinet Gorge hydro project on the Clark River in northern Idaho, the power-short Pacific Northwest should have an additional 200,000 kw of capacity by this time next year.

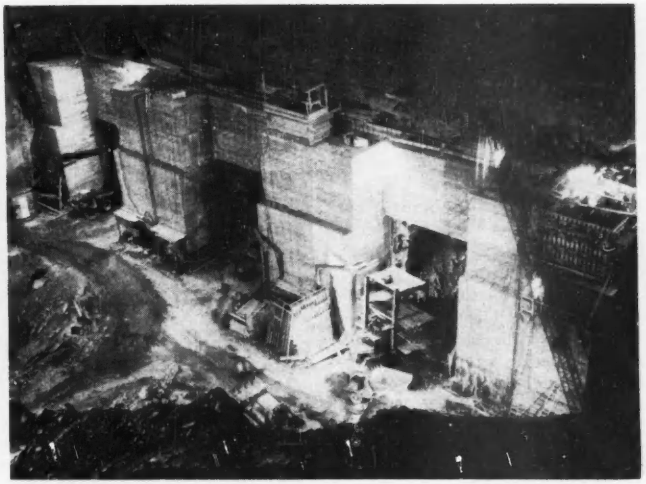
First concrete for the dam was poured this month after final work on the river bottom had been completed. Turbine foundations below the powerhouse site have been roughed out and the last two of four penstock tunnels are nearly finished.

Operation of the first of the four 50,000-kw units is scheduled for Sept. 1, 1952, with the other three following at one-month intervals. This would put all four units on the line by mid-December, in time to carry a substantial part of WWP's peak requirements.

Construction of the 80-mile, 230-kv wood pole transmission line to carry Cabinet Gorge power into the company's receiving substation in Spokane also is expected to be completed by Sept. 1. Right of way clearing and erection of poles on a 25-mile stretch through two 5,000-ft passes has begun.



FIRST SECTION of steel liner is placed in one of 450-ft penstock tunnels



PENSTOCK TUNNELS, photographed at night, are being bored through rock walls to carry water to powerhouse turbines. The installation will have four tunnels

Missouri Utilities, Federal Bodies Skirmish Over REA Steam Plants

Ten power companies operating in Missouri skirmished with four federal agencies in Washington District Court last week in an attempt to prevent the government from building steam power plants which they said would compete with them.

The companies charged that Rural Electrification Administration and Southwestern Power Administration had exceeded their statutory authority in combining to build systems in the Missouri area.

Ask Temporary Injunction

They asked a temporary injunction to block the REA loans, and also named the Departments of Interior and Treasury in the complaint. The government countered with a motion for summary dismissal of the suit on the grounds the companies have no legal basis for contest.

The final decision could well determine to what extent federal agencies can combine to build large power systems. Attorneys expected no immediate decisions on the preliminary motions. The main issues can be argued only after the preliminaries are disposed of.

Specifically, the power companies are charging REA-financed transmission and generating cooperatives have no legal right to use government funds for construction of facilities for lease to SPA. The companies also charge SPA has no right to participate in deals involving the lease and eventual acquisition of REA-financed facilities.

Propriety Questioned

Propriety of these deals has been questioned many times during Congressional hearings. However, this is the first test of the legality of such practice before the courts.

Companies involved include: Kansas City Power & Light Co, St. Joseph Light & Power Co, Missouri Power & Light Co, Public Service of Warrensburg, Missouri Gas & Electric Service Co, Union Electric Co of Missouri, Missouri Utilities Co, Edison Co of Louisiana, Empire District Electric Co, and Arkansas-Missouri Power Co of Blytheville, Ark.

Rural cooperatives involved are: N. W. Electric Power Cooperative of Cameron; Sho-Me Electric Corp of Marshfield; Central Electric Power Cooperative of Jefferson City; Arkansas Electric Cooperative Corp of Ozark, Ark.; and Western Electric Cooperative and Kano Electric Cooperative, both of Oklahoma.

•

Con Ed to Use Oil-Fired Boilers to Curb Smoke

Consolidated Edison Co of New York plans to replace a number of coal-fired boilers in its Hudson Ave generating station in Brooklyn with oil-fire operation to cut down the emission of smoke from the plant.

The plan is another step in the company's program to comply with the regulations of New York City's Smoke Control Bureau. Con Ed plans to modernize boilers at three other plants toward this end (EW, Dec. 17, p 78).

The company said that in normal periods the present boilers can operate within city regulations but during emergency periods there is an excess of smoke which will be corrected through use of oil-fired boilers. Cost of the installation will be $600,000.

Con Ed has applied to the Defense Electric Power Administration for permission to make the installation and if it is granted the company hopes to complete conversion early in 1952.

Britain Reveals Atomic Heating Unit

The first atomic heating plant in the world has been put into operation at Britain's atomic research establishment, Harwell. There, a building of 80 offices is drawing its heat from a large experimental atomic pile. In the installation shown above, water is heated by a heat-exchanger placed in the outlet air duct of the pile's air cooling system and then passed by a closed circuit to a second heat exchanger which heats the water used in the office building's radiators and hot water system.

EVERYBODY BENEFITS
with SYLVANIA'S great new
KITCHEN LITE
(... 150 WATTS IN 100-WATT SIZED BULB)
"A wonderful load builder," say utility men.
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"Now I can see better," say housewives.
"A fast-moving item," say retailers.
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SYLVANIA

Sure, this new Sylvania Kitchen Lite is small in size, but it's *big* in power ... *big* in popularity ... *big* in sales!

Same size as a 100-watt bulb, it fits all standard fixtures. But, it shines out a full 150 watts. Ideal for kitchens, laundries, work shops, playrooms, and garages. Etched "Kitchen Lite" for easy identification.

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Please send me full details about Sylvania's new Kitchen Lite Promotion Program.

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Facts from KANSAS

"'CSP' Transformers cut failures to zero"

"Until a few years ago, our system was equipped 100% with conventional transformers. A particularly hot rural line was giving us considerable trouble, so we decided to make a test installation of 'CSP' Transformers comprising 160 stations," says a Kansas Utility.

"Accurate records had been kept for two years prior to installation of the 'CSP' Transformers and were also kept for the two succeeding years. The records show that of the conventional transformers, 45 had been damaged by lightning, and required 491 service trips for re-fusing.

"Of the 'CSP' Transformers, not one was damaged. Only 39 instances occurred where secondary breakers opened to protect the transformers from short-circuits or overloads. This record gave us good reason to adopt the 'CSP' Transformer for all future construction and replacement."

Installation and maintenance costs for Westinghouse "CSP" (Completely Self-Protecting) Transformers are always lower, because complete protective equipment is built in, not separately mounted. A two-year survey of Electric Light and Power Companies shows the following: J-70590

NATIONAL AVERAGES

	"CSP"	Conventional
Installation Costs	$13.87	$24.74
Burn-out Rate	0.257%	1.005%
Fuse Outages	None	5.64% @ $6.52 per outage
Load Checks	Automatic	12.8%
Breaker Reset	1.02%	None

If you'd like to check your own costs against these national averages, ask your Westinghouse representative for Booklet 4-247-B, "Transformer Costs and Their Relation to Profits", Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa.

"CSP" devices . . . originated and patented by Westinghouse.

YOU CAN BE SURE... IF IT'S

Westinghouse

"CSP" DISTRIBUTION TRANSFORMERS

V.C. CABLE

Wherever you need resistance to heat, oil and grease . . . specify Roebling Varnished Cambric

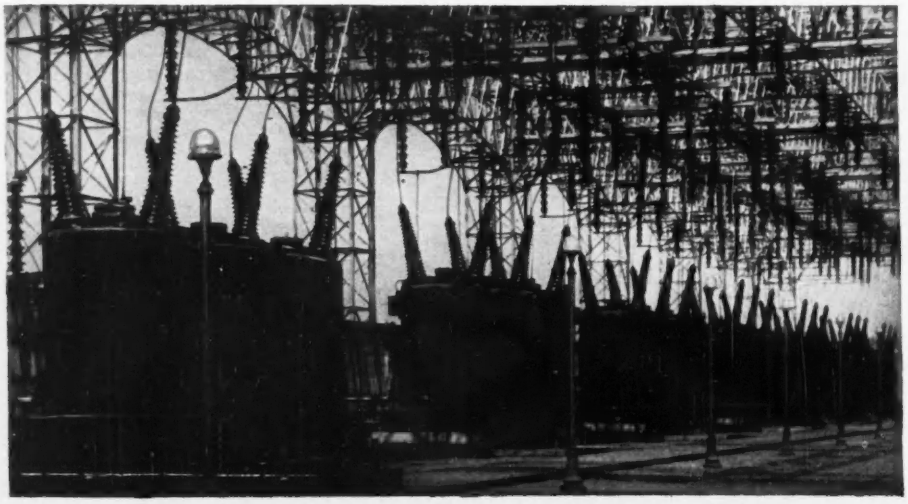
AS LEADS for generators, transformers, motor and oil switches . . . for general distribution of heavy power loads in manufacturing and industrial plants, your top specification is Roebling Varnished Cambric Cable. . . . Roebling V.C. is made in single conductor sizes from 2,000,000 C.M. to #14 A.W.G.; in multiple conductor sizes from 750,000 C.M. to #14 A.W.G. It is recommended for use up to 17,000v between phases in single or multiple conductor construction; and to 26,000v for single conductor grounded neutral.

Large quantities of Roebling's complete wire and cable line are now required in the rearmament program. The Roebling organization and distributors will do their best, however, to meet your delivery needs. John A. Roebling's Sons Company, Trenton 2, N. J.

Manufactured with solid conductors or stranded in a variety of strandings, cased or uncased, according to your needs. Available in single or multiple conductor.

Insulated with varnished cambric tape, in accordance with I.P.C.E.A. and Underwriters' specifications unless otherwise specified by you.

For outside covering you have a choice of braid, for service in dry locations; lead, for service in damp locations; and for aerial use or direct burial we recommend a protective armor such as steel tape or galvanized round wire armor.



ROEBLING

Atlanta, 934 Avon Ave ★ ***Boston,*** 51 Sleeper St ★ ***Chicago,*** 5525 W. Roosevelt Rd ★ ***Cincinnati,*** 3253 Fredonia Ave ★ ***Cleveland,*** 701 St. Clair Ave, N.E. ★ ***Denver,*** 4801 Jackson St ★ ***Detroit,*** 915 Fisher Building ★ ***Houston,*** 6216 Navigation Blvd ★ ***Los Angeles,*** 216 S. Alameda St ★ ***New York,*** 19 Rector St ★ ***Odessa, Texas,*** 1920 E. 2nd St ★ ***Philadelphia,*** 230 Vine St ★ ***San Francisco,*** 1740 17th St ★ ***Seattle,*** 900 1st Ave, S. ★ ***Tulsa,*** 321 N. Cheyenne St ★ Export Sales Office, ***Trenton, N. J.***

Selling Still Held Principal Concern of Food Service Equipment Makers

Selling, not production, remains the principal concern of makers of electric food service equipment, despite steel, copper and other shortages. Materials for manufacture of fry kettles, broilers, ovens, and other cooking equipment will be available through the first half of 1952 in such quantity that a real selling effort will be required to dispose of the goods produced.

This opinion was expressed by manufacturers at a recent meeting of the Edison Electric Institute Commercial Cooking Committee in Cincinnati.

Combined Session Held

At a combined session with committees representing the food service equipment industry and electrical manufacturers, M. P. Duke, chairman of the food service equipment committee, predicted that in three years 75% of food service equipment sales would be electric. At variance with the opinion of other manufacturers' representatives present, Duke indicated some concern about production volume.

Discussions in the joint session were centered on servicing problems, maintenance of repair parts stocks, and field testing before equipment is marketed.

Much of the need for servicing and replacement of parts arises from the fact that the buyer of food service equipment is not given thorough instruction in the proper operation and care of it. It is the responsibility of the manufacturer to train dealer salesmen to supply such instruction, but often this is not done. Besides, the discussion brought out, there are too many dealers competing for the business, largely on the basis of price, and they can not give the best service on narrow profit margins.

Commercial Cooking Specialist

The committee suggested that EEI add a commercial cooking specialist to its staff. A duty of this man would be to act as liaison with the headquarters of chain stores that include food service in their operations, and thus assist utilities in selling electric cooking to stores of the chains in their territories. Another function would be to organize adequate representation of the electrical industry in national hotel and restaurant equipment shows.

Local utilities, it was pointed out, frequently see to it that electric cooking is well represented in local shows. In the big national shows, however, only scattered representation is afforded by the separate exhibits of individual manufacturers.

To help utility salesmen who are not expert in commercial cooking—and few are—the committee is preparing an "Answer Book" containing detailed information on the subject. The book will go into production early next year and is expected to be ready for distribution in the spring.

Next meeting of the committee, according to S. S. Sansbury, chairman, will be at Philadelphia, Feb. 14-15.

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Minnesota Utilities, Co-ops Back USBR 230-Kv Line

Minnesota power companies and farm electric cooperatives have banded together to get a slice of the federally produced power from Missouri Basin projects.

Representatives of three power companies and 16 cooperatives recently offered to back the Bureau of Reclamation in requesting funds for building a 230-kv line from Garrison Dam in North Dakota to serve the Minnesota utilities.

The bureau is expected to request funds for building some transmission lines in that general area either in 1952 or 1953. At present the plan of the companies and cooperatives is being studied by the bureau. General approval is almost certain, observers believe.

The Minnesotans propose that the government build a line from the Garrison project to Fergus Falls, Minn., thence to Benson, Granite Falls, Mankato and southerly and westerly to a suitable connection with one Missouri Basin power system.

This line would be tapped at appropriate points, and both the co-ops and companies promised to make the most efficient use of the power possible.

"United support is the heart of the plan," they said in a letter to Reclamation Commissioner Michael Straus.

Companies supporting the plan are: Northern States Power Co, Otter Tail Power Co, and Interstate Power Co.

Cooperatives taking part are Southwestern Minnesota Cooperative Electric, Minnesota Valley Cooperative Light & Power, Steele-Waseca, Blue Earth Nicollet, Todd-Wadena, South Central, Central Minnesota, Renville-Sibley, Agra-Lite, Nobles, Lyon-Lincoln, Brown County, Runestone, Lake Region, Traverse Electric, and Federated Rural Electric.

Changes in Capacity Reported to Federal Power Commission

PLANT ADDITIONS DURING OCTOBER

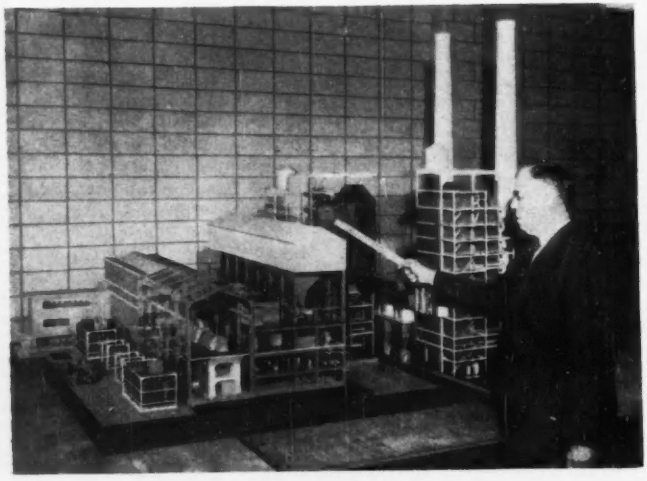
State	Utility	Plant	Fuel	Capacity (Kw)
Vt.	Central Vermont Public Service Corp	Gas Turbine	S	5,000
Mass.	Montaup Electric Co	Somerset	S	60,000
Ind.	Northern Indiana Public Service Co	Michigan City	S	70,015
Ill.	Mascoutah Municipal Light & Power Plant	Mascoutah	IC	1,112
Mich.	Marshall City Water & Electric Works	Marshall	IC	1,170
Wis.	Iron River Water, Light & Telephone Co	Iron River	IC	50
Iowa	Sumner Municipal Light Department	Sumner	IC	700
Neb.	Chappell Municipal Utilities	Chappell	IC	1,000
Kan.	Wheatland Electric Cooperative, Inc	Scott City	IC	7,035
Ky.	U. S. Army Corps of Engineers	Wolf Creek	H	90,000
Tenn.	Tennessee Valley Authority	Johnsonville	S	112,500
Tex.	Lower Colorado River Authority	Marble Falls	H	30,000
Tex.	Coleman Power & Light Department	Coleman	IC	1,250
Ariz.	Arizona Edison Co	Ajo Heights	IC	305

PLANT RETIREMENTS DURING OCTOBER

Mich.	Marshall City Water & Electric Works	Marshall	IC	400
Iowa	State Center Light & Power Department	State Center	IC	148
Mo.	Black River Electric Cooperative	Ellington	IC	220
Mo.	Black River Electric Cooperative	Intesville	IC	92
N. D.	Otter Tail Power Co	Westhope	IC	30
S. D.	Miller Light & Power Department	Miller	S	312
Kan.	Beloit Light Department	Old	IC	1,980
Ky.	Kentucky Utilities Co	Maysville	S	1,750
La.	Louisiana Power & Light Co	Napoleonville	IC	96
La.	Louisiana Power & Light Co	Montgomery	IC	190

H—Hydro, IC—Internal Combustion, S—Steam
United States Capacity as of Nov. 1—Hydro, 18,739,236 kw; Internal Combustion, 1,961,611 kw; Steam, 53,990,878 kw; Total, 74,691,725 kw.

Utah P&L Unit Is First in Region . . .



to Incorporate Steam Reheat Cycle

Part of the $68 million Utah Power & Light Co plans to spend for expansion in the next few years is going into two 75,000-kw units at the Gadsby Plant in Salt Lake City. Both will use steam reheat cycles, first such installations in the region.

The plant (top picture) already is in operation with a 66,000-kw machine. The second unit is being installed in the section under construction in the foreground. A third will be installed to the right of the second.

In the lower picture, T. A. Purton, the company's chief engineer, points out the reheat features in a scale model of Gadsby Plant. Third unit will also have reheat.

The second unit, which is expected to go on the line next October, will aid in meeting the area's power demands. Since 1946, industrial demand has increased 2¼ times. By 1953, the region's overall demand will have trebled, according to estimates by the company.

Interior OKs Labor Pact of USBR, Colorado Body

Interior Department has approved a collective bargaining agreement between the Bureau of Reclamation and the Colorado River Power Trades Council.

Within statutory limits, the agreement gives some 500 hourly employees of the bureau a voice in determining wage rates, working conditions, and other employment details. Those covered are skilled workers at Davis Dam and Phoenix, Ariz., at Parker Dam in California, and at bureau substations and other power facilities in Nevada, Arizona, and California.

The agreement does not give workers the right to strike, but sets up machinery for representative participation in dealing with labor relation problems.

This is the second such agreement negotiated between the bureau and its employees, a similar arrangement having been made with workers in the Columbia River District in Washington State last year.

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CEICo Opposes Increase in Freight Rates on Coal

Cleveland Electric Illuminating Co and a number of Ohio coal producers recently went before the Ohio Public Utilities Commission to protest a proposed increase in freight rates on coal within Ohio.

Railroads in the state have been granted a boost of 16 to 18¢ a ton by the Interstate Commerce Commission. They had asked for a hike of 50¢.

Cleveland Electric pointed out that under present rate structures, aside from the increase in question, coal shipped to Cleveland and other lake ports for transshipment to upper lake areas is carried from mine to lower Lake Erie ports for about 40¢ less a ton than if the coal were to be used in the Lake Erie port cities.

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Wage Increase Granted

Consumers Power Co, Jackson, Mich., has signed a supplemental wage agreement with the Utility Workers of America, CIO, providing wage increases of 5 to 7¢ for 4,538 employees.

Large Units Are Most Economical, EEI Prime Movers Group Is Told

Reasons for increasing the size of power plant units were advanced at a recent meeting of the Prime Movers Committee of Edison Electric Institute at Atlantic City.

Studies, supported by actual cost experience, have indicated that a plant of two-boiler, two-turbine arrangement would cost only 25% more than a one-boiler, one-turbine installation, M. K. Drewry, Wisconsin Electric Power Co, reported. If a one boiler-one turbine installation can replace an eight boiler-eight turbine installation, total construction cost could be halved.

Use of large units, up to 300,000 kw and perhaps beyond, was easily supported, percentage-wise, by electrical load growth and interconnection of electrical generating facilities.

The problem of designing steam plants for low first cost as well as for high fuel economy was taken up by a panel conducted by the committee's design section. John Drabelle, Iowa Electric Light & Power Co, was panel chairman. M. K. Drewry; Herman Weisberg, Public Service Electric & Gas Co, Newark; and H. A. Wagner, Detroit Edison Co, were panel members.

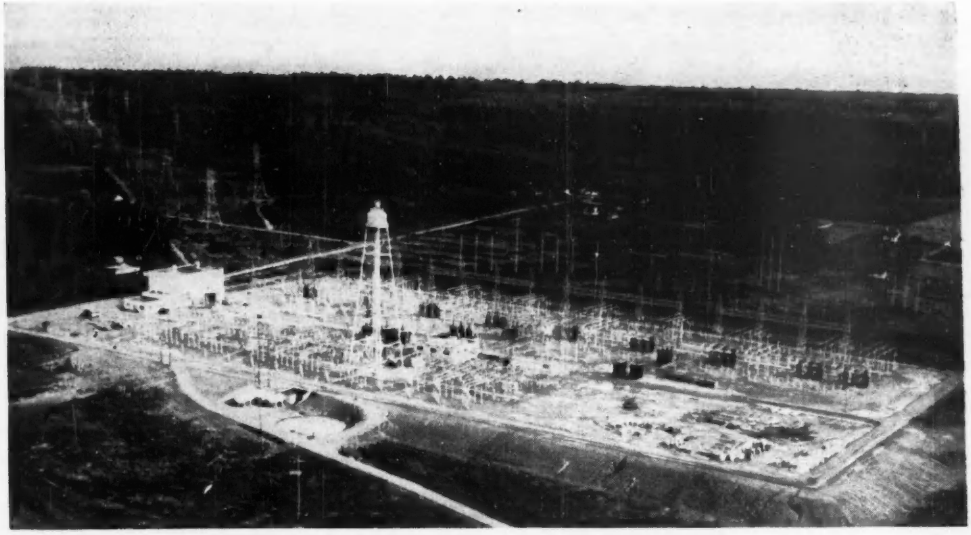
Reported also was an investigation of the use of radioactive isotopes in steam power plant testing. Isotopes of half life varying from a fraction of a second, to 30 days or longer are now available. High accuracy and easily made analysis of such factors as steam contamination, leakage, and corrosion may become possible with this method.

8 Companies in the East Sign 3-Year Pooling Pact

A group of electric utilities in New York, New Jersey, and Pennsylvania have signed a three-year agreement for interchanging power to provide the public with more dependable, efficient and economical service through use of existing interconnection facilities.

The companies involved in the pool are Niagara Mohawk Power Corp and New York State Electric & Gas Corp in New York; Jersey Central Power & Light Co and New Jersey Power & Light Co in New Jersey; and Philadelphia Electric Co, Pennsylvania Power & Light Co, Pennsylvania Electric Co, and Metropolitan Edison Co in Pennsylvania.

The agreement will continue for three years and can be extended on a year-to-year basis. Any company desiring to terminate the pact is required to give a year's notice before taking such action.



Bothell Substation to Transform Seattle's Power

Now virtually complete, this $5 million Bothell substation of Seattle City Light will provide better control of power transmission from the city's Skagit River plants, located far to the north.

Power from the Gorge and Diablo Dams and later from the Ross powerhouse, now under construction, will be routed to this station and then relayed to any or all of four receiving substations in the city.

Already in operation, a transmission line connecting the city system with the Snohomish substation of the Bonneville Power Administration simplifies the interchange of current with the federal agency. When completed next month, the station's nine 30,000 kva transformers will step down voltage from 230 kv to 115 kv.

Defense Electric Power Administration

(Prepared by Electrical World—Dec. 14, 1951)

Office of the Administrator
Administrator—James F. Fairman (5459-X664)
Deputy Administrator—John D. Davis (5459-X5238)
Special Assistant—Francis A. Kolb (5458-X2553)
Staff Assistant—John C. Evans (5456-X647)

Office of Consultant Staff
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T. F. Treadway (5456-X659)
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Office of the General Counsel—E. Jason Dryer (5451-X2698)

Office of Information—George S. Holmes (5443-X3222)

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Power Requirements Branch—Clifford Beardsley (2442-X3227)
Power Coordination and Planning Branch—Arthur B. Vieregg (5444-X2870)

Materials and Equipment Division—Director, Donald R. McClung (5450-X621)
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Major Projects Control Branch
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Charles Cornforth (4460-X5216)
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T. M. Hotchkiss (4452-X5216)
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L. E. Frey (4457-X5385) Sedric Payette (4457-X5385)
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A. M. Frost (4453-X5385) H. L. Livingood (4453-X5385)
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B. B. Parker (3616-X2947) Archie L. Sills (3616-X2664)
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Ben S. Loeb (4542-X5165) Paul Hand (4544-X2932)
Joseph B. Epstein (4540-X5165)

Administrative Management Division—Director, Fred W. Bolen (5447-X5239)
Programs and Finance Branch—Charles F. Winter (5441-X5377)
Personnel Branch—Hazel J. Butler (5445-X2480)
General Services Branch—George F. Gauzza (5013-X4471)
All offices are in the Department of Interior Building, C Street betwen 18th and 19th Sts., NW, Washington, 25, D. C. Telephone extensions (X) are on REpublic 1820. Numbers with each name are room and phone extensions.

15¢ Wage Raise Pattern for Nonferrous Mining

The 15¢ hourly wage increase negotiated by major companies in nonferrous metal mining is now the official industry "pattern." The Wage Stabilization Board has approved the increase in two parts:

1. Eight cents as an across-the-board increase permitted under WSB's 10% "catchup" and cost-of-living formulas.

2. An average of 7¢ an hour to be used in a job reclassification to correct intraplant inequities.

WSB withheld action on agreements of some companies to install or improve pensions plans at a cost of 4.5¢ an hour, to give a third week of vacation after 15 years of service, and to increase night-shift differential.

Except for these fringe issues, WSB's approval culminated another round of wage bargaining highlighted by the week-long copper strike in August and a Taft-Hartley 80-day strike injunction.

The board's decision involved over 25,000 employees of Kennecott Copper Co, Phelps Dodge Corp, American Smelting & Refining Co, Anaconda Copper Mining Co, and nine smaller companies in Utah, New Mexico, Arizona, and Nevada. They are represented by the left-wing Mine, Mill and Smelter Workers (ex-CIO) and other smaller unions.

Depa Survey Indicates Tight Power Supply in '51

The nation's electric utilities will have to dip into their power reserves to carry the 1951 and 1952 peaks. This is indicated by the Defense Electric Power Administration's latest survey.

Power requirements as defined in the survey include minimum reserves needed for ordinary operating and maintenance purposes. Depa has assigned no flat percentage for this purpose but has endeavored to arrive at reserves needed in individual situations.

On this basis this is the picture of the nation's power supply for the next four years:

Year	Power Requirements (Kw)	Capability (Kw)
1951	75,500,000	74,500,000
1952	85,500,000	84,500,000
1953	94,500,000	96,500,000
1954	101,000,000	104,500,000

Commenting on the survey, Deputy Depa Administrator John D. Davis said the requirement figures "if anything are too low." Furthermore, he explained, capability will be there in the future only if generating plants now under construction are put into operation on schedule. Because of material shortages the expansion program is already running 600,000 kw behind for 1952.

Anaconda and Interior Negotiating Power Pact

Anaconda Copper Co has surmounted another barrier on its way to becoming a producer of aluminum.

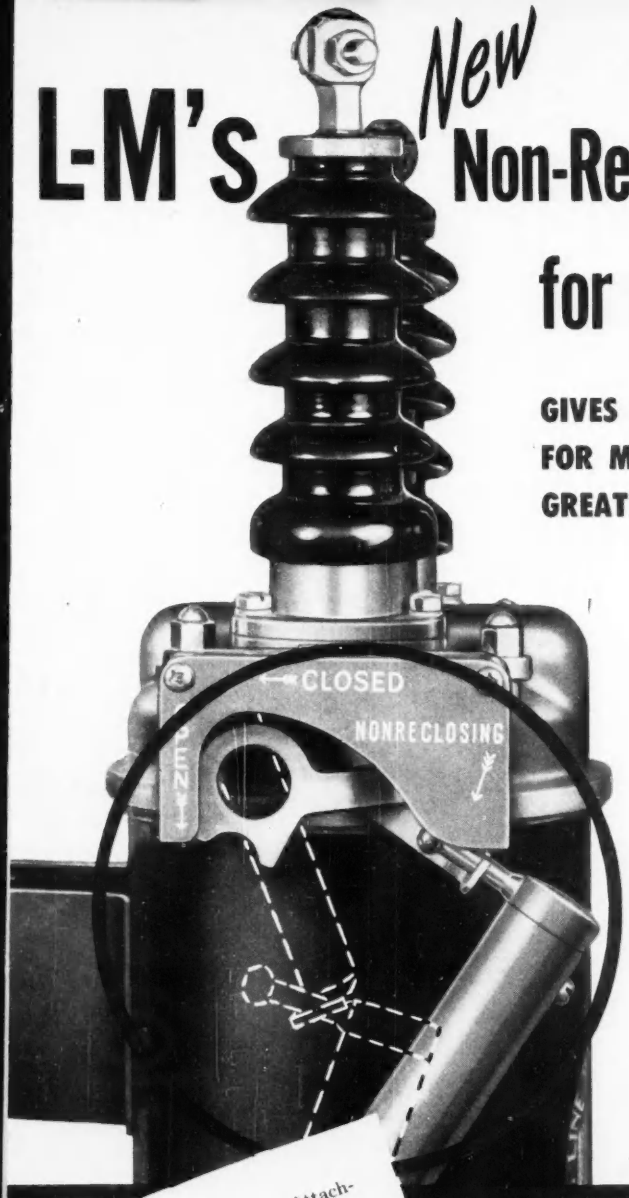
Interior Department officials, who objected to Anaconda as a consumer of power from Hungry Horse Dam in Montana, have been overruled. They are under instructions to make a contract with Anaconda and its partner in the aluminum enterprise, Harvey Machine Co.

F. O. Case, vice president of Anaconda, said last week that negotiations are underway and are proceeding satisfactorily. The company plans to construct a $40-million plant at Kalispell, Mont., which will produce 108 million lb of aluminum a year.

Mobilization officials told Interior to sign with Anaconda in the interests of greater speed in the production of aluminum.

L-M's *New* Non-Reclosing Attachment for Kyle® Reclosers

GIVES GREATER SAFETY FOR MEN AND EQUIPMENT... GREATER SAFETY IN HOT LINE WORK



L-M's new Non-Reclosing Attachment provides lockout of the recloser on the first fast operation. Should an accidental contact or arc occur while men are working on the line, the recloser opens instantly and stays open, instead of continuing through the usual complete four-operation sequence.

This new attachment provides the same protection out on the line that has been available only on substation breakers. It permits hot line work with far greater safety to men and equipment. The attachment is available at a small extra cost on all Kyle reclosers.

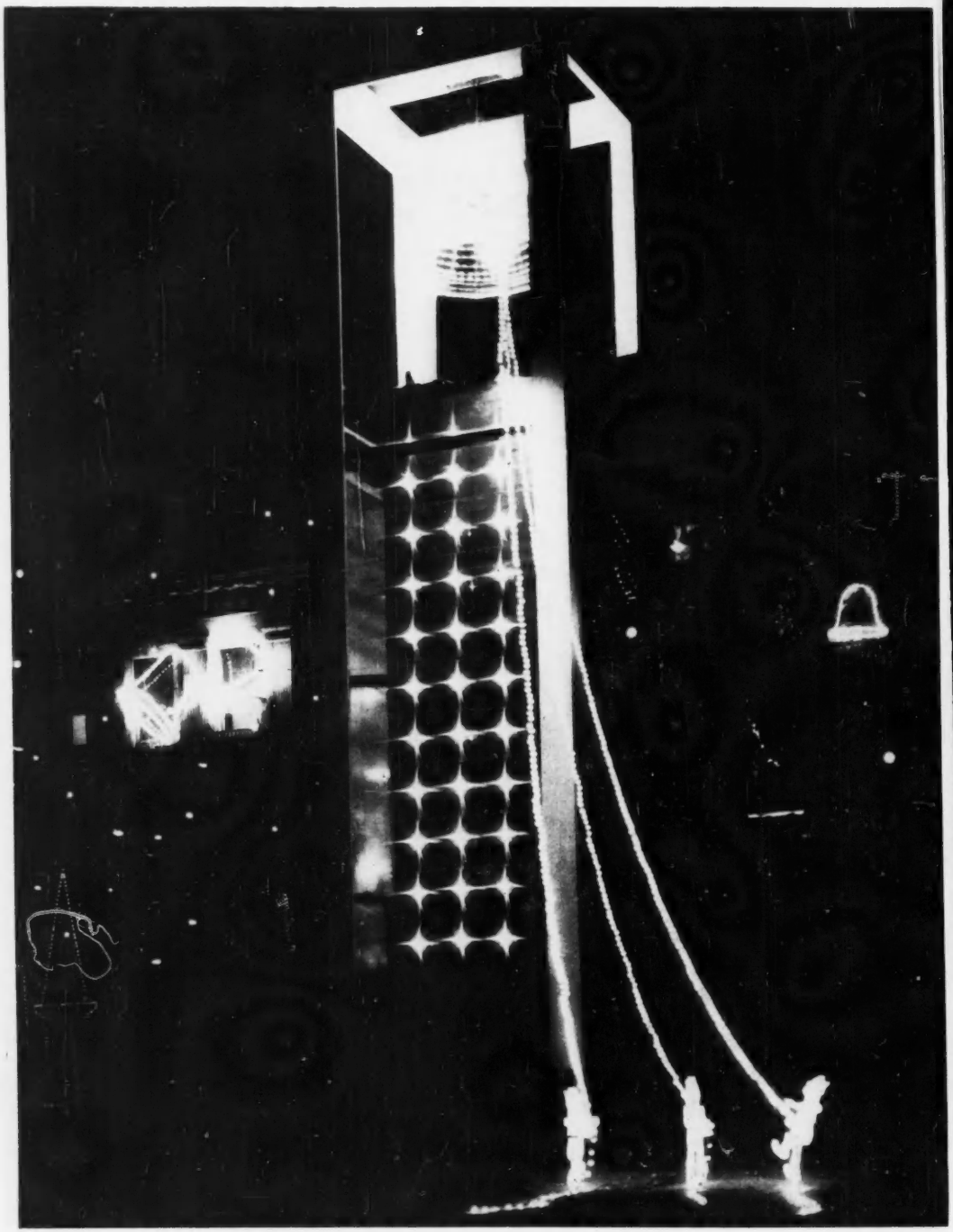
For complete information ask the L-M Field Engineer or write Line Material Company, Milwaukee 1, Wisconsin (a McGraw Electric Company Division).

72

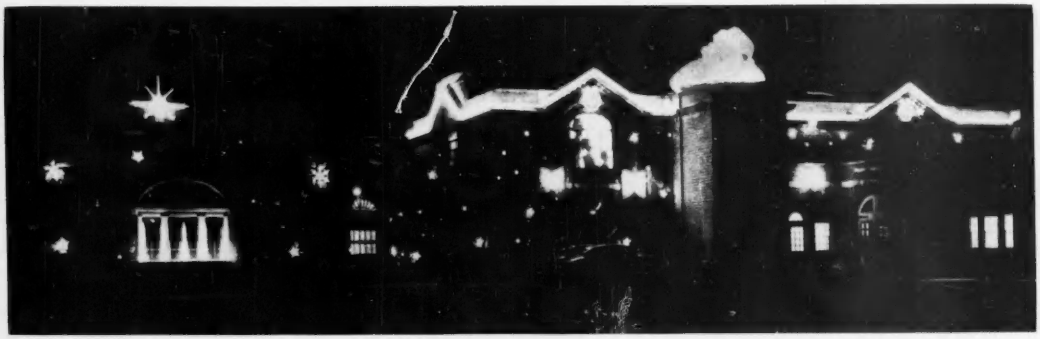
The Non-Reclosing Attachment lever is under the sleet hood next to the regular reset handle. Pulling down the lever puts the attachment into operation but *does not* open the line. When work is completed the lever is pushed back up—and the recloser will then operate normally.

LM®

LINE MATERIAL



BELL TOWER OF LIGHT dominates a mythical city in which typical spires and domes of the world's churches are outlined with blue incandescent lamps. Off left, an eight-foot "Star of the East," made from incandescents, shines down on Cleveland



FESTIVE VILLAGE SQUARE was created from information office and parking lot. Santa Claus slides down "chimney", right

A Christmas Prayer for Peace in Light . . .

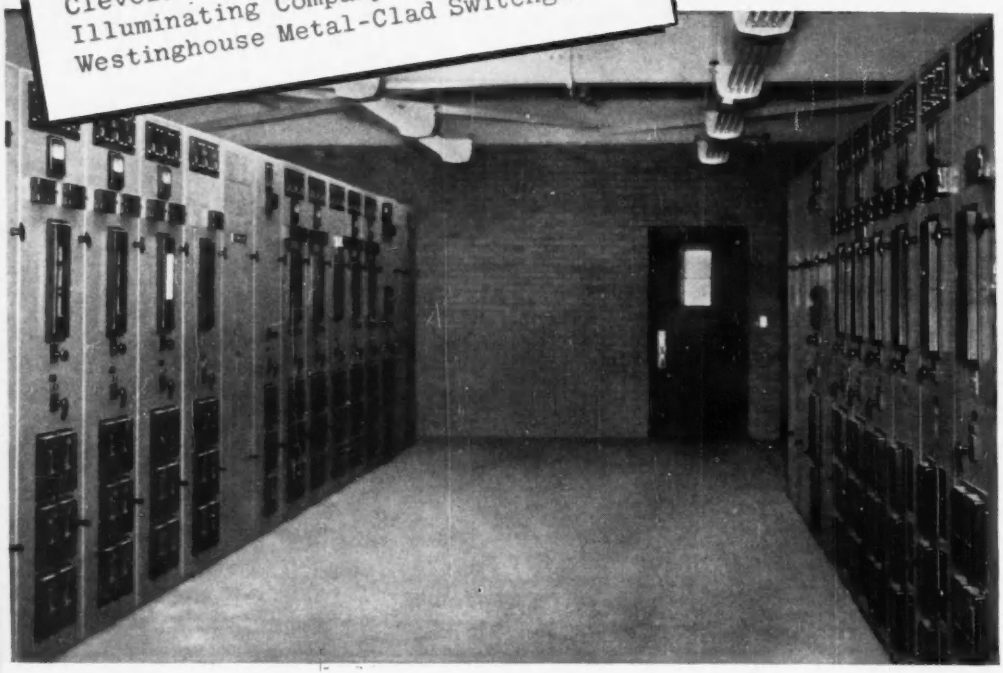
. . . is the essence of this year's nighttime display designed by General Electric illuminating engineers at Nela Park, Cleveland

HALF MILLION persons are expected to pass Entrance Lodge to see exhibit

OPENING NIGHT some of the younger visitors wanted to help elves ring 2,000-bulb "bell." In all, this 18th Nela Park display used 5,000 lamps

IRIDESCENT SNOWMAN, made of snowy glass floss, bids traditional farewell at exit of "Skyline Drive"

Cleveland Electric
Illuminating Company reports on
Westinghouse Metal-Clad Switchgear...



"Keeps Maintenance Cost Down!"

At the Cleveland Electric Illuminating Company's Ridge Road Substation, this installation of Westinghouse Metal-Clad Switchgear is setting an excellent service record. And what they say about it suggests a savings opportunity for you:

"We particularly like its low maintenance characteristics. In two years of operation, there has been a minimum of inspection and maintenance. Expected result is an appreciable long-range saving."

Some of the features contributing to this saving are easy accessibility to component parts, simple, fast removal and replacement of draw-out air breakers, and exclusive "De-ion"® circuit interruption.

The complete story of the savings possibilities of Westinghouse Unitized, Metal-Clad Switchgear is contained in Booklet B-4016. For your copy write Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Penna. J-60767

YOU CAN BE SURE...IF IT'S
Westinghouse

METAL-CLAD
SWITCHGEAR

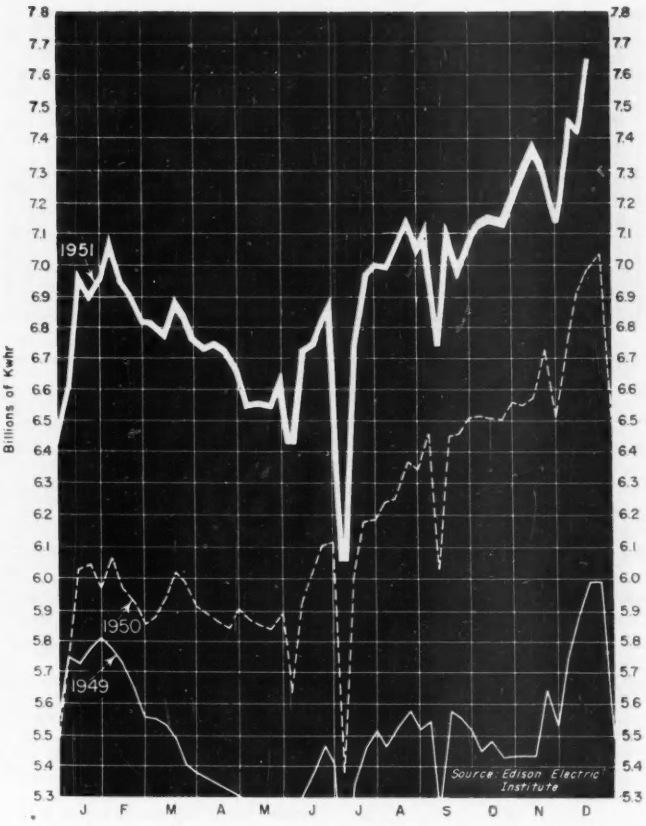
October Energy Output Sets New Monthly High

Production of energy by electric utilities set a new monthly high in October—32,440,940,000 kwhr — the Federal Power Commission reports. The October figures topped the previous high, 32,326,489,000 in August, 1951, by 0.4%.

The October production total was 11.3% above the 29,155,224,000 kwhr produced during October, 1950, and 7.2% above production in September, 1951.

Production for the year ended Oct. 31 reached a record 364,673,115,000 kwhr, an increase of 13.9% over the 320,160,629,000 kwhr for the year ended 12 months earlier, and 0.9% more than the previous high set during the period ended a month earlier.

Water power plants produced 7,548,256,000 kwhr in October. This was 2.2% more than in October, 1950. As a per cent of the October total production, water power output decreased from 25.3% last year to 23.3% this year. Fuel plants produced 24,892,684,000 kwhr during October.



Output Week Ended Dec. 15—7,666,864,000 Kwhr

Weekly Output, Millions Kwhr

1951		1950		1949	
Dec	15 7,667	Dec	16 6,985	Dec	17 5,997
Dec	8 7,444	Dec	9 6,909	Dec	10 5,881
Dec	1 7,476	Dec	2 6,716	Dec	3 5,743
Nov	24 7,157	Nov	25 6,508	Nov	26 5,537
Nov	17 7,333	Nov	18 6,728	Nov	19 5,644
Nov	10 7,396	Nov	11 6,574	Nov	12 5,435
Nov	3 7,319	Nov	4 6,551	Nov	5 5,435
Oct	27 7,234	Oct	28 6,563	Oct	29 5,433
Oct	20 7,149	Oct	21 6,508	Oct	22 5,430
Oct	13 7,160	Oct	14 6,509	Oct	15 5,481

Per Cent Change from Previous Year

	Dec 15	Dec 8	Dec 1
New England	+ 6.1	+ 4.1	+ 5.8
Mid-Atlantic	+ 7.1	+ 5.9	+10.9
Central Industrial	+ 6.5	+ 3.8	+10.3
West Central	+10.5	+ 8.6	+10.8
Southeast	+11.3	+ 8.2	+ 9.7
South Central	+21.0	+22.0	+23.2
Rocky Mountain	+13.9	+11.3	+13.8
Pacific Coast	+12.5	+10.8	+12.1
Total United States	+ 9.8	+ 7.7	+11.3

MEETINGS

Edison Electric Institute
Accident Prevention Committee, Hotel Roosevelt, New Orleans, January 7-8, 1952; Electrical Equipment Committee, Netherlands Plaza Hotel, Cincinnati, Ohio, February 11-12, 1952; Transmission-Distribution Committee, New Hotel, Jefferson, St. Louis, February 14-15, 1952; 18th Annual Sales Conference, Edgewater Beach Hotel, Chicago, March 31-April 3, 1952.

American Institute of Electrical Engineers
Winter General Meeting, Hotel Statler, New York, January 21-25, 1952.

Instrument Society of America
1952 Regional Power Plant Instrumentation Conference, New York Section, Hotel Statler, New York, February 7-8, 1952.

★Missouri Valley Electric Association
Industrial-Commercial Sales Conference, Hotel President, Kansas City, Mo., February 7-8; Engineering Conference, Hotel President, Kansas City, Mo., April 2-4, 1952.

★Pennsylvania Electric Association
Winter Meeting, Transmission-Distribution Committee, Penn Harris Hotel, Harrisburg, Pa., February 7-8, 1952; Winter Meeting, Relay Committee, Fort Stanwix Hotel, Johnstown, Pa., February 20-21, 1952; Prime Movers-Electrical Equipment Committees, Benjamin Franklin Hotel, Philadelphia, February 28-29, 1952.

Public Information Program
East North Central Region Meeting, Fort Wayne Hotel, Columbus, Ohio, February 19, 1952.

American Society for Testing Materials
Spring Meeting-Committee Week, Hotel Statler, Cleveland, March 3-7, 1952.

★National Electrical Manufacturing Association
Section Meeting, Edgewater Beach Hotel, Chicago, March 10-13, 1952; 4th International Lighting Exposition-Conference, Industrial-Commercial Lighting Equipment Section, Cleveland Auditorium, Cleveland, May 6-9, 1952.

National Association of Corrosion Engineers
Annual Conference, Buccaneer Hotel, Galveston, Tex., March 10-14, 1952.

Illuminating Engineering Society
South Pacific Coast Regional Conference, Hotel Sir Francis Drake, San Francisco, March 13-14, 1952; Southwestern Regional Conference, Hotel Tulsa, Tulsa, Okla., April 6-8, 1952; Southern Regional Conference, Hermitage Hotel, Nashville, Tenn., April 20-22, 1952; Canadian National Conference, Hotel General Brock, Niagara Falls, Ontario, Can., April 30-May 2, 1952.

Southeastern Electric Exchange
Engineering-Operation Section Conference, Jung Hotel, New Orleans, La., March 13-14, 1952; Annual Conference, Boca Raton Hotel, Boca Raton, Fla., April 21-23, 1952.

Pacific Coast Electrical Association
Operating Economics Section Conference, Hotel California, Fresno, Calif., March 20-21, 1952; Administrative Services Section Conference, Los Angeles, April 17-18, 1952; Business Development Section Conference, Hotel Huntington, Pasadena, Calif., April 24-25, 1952.

American Society of Mechanical Engineers
Spring Meeting, University of Washington, Seattle, March 24-26, 1952.

Oklahoma Utilities Association
Annual Convention, Biltmore Hotel, Oklahoma City, March 27-28, 1952.

★Maryland Utilities Association
Lord Baltimore Hotel, Baltimore, April 4, 1952.

Rocky Mountain Electrical League
Spring Conference, Shirley Savoy Hotel, Denver, Colo., April 20-22, 1952.

Public Utilities Advertising Association
Annual Convention, Hotel Radisson, Minneapolis, Minn., May 8-9, 1952.

International Organization of Standardization
Triennial Meeting, Columbia University, New York, June 9-21, 1952.

★ Addition this week.

YIELDS (%) — Operating Electric Utility Securities

Quality	Bonds			Preferred Stocks			Common Stocks		
	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
DATE									
1951									
Dec. 13	**3.01**	**3.07**	**3.16**	**4.29**	**4.48**	**4.86**	**5.37**	**6.15**	**6.96**
Dec. 6	3.01	3.08	3.18	4.28	4.50	4.82	5.38	6.16	6.80
END OF QTR:									
3rd 1951	2.87	2.91	3.04	4.05	4.27	4.61	5.52	6.24	7.05
2nd 1951	3.02	3.11	3.23	4.11	3.37	4.68	5.73	6.38	7.78
1st 1950	2.87	2.93	3.00	3.96	4.19	4.52	5.47	6.20	7.13
4th 1950	2.65	2.67	2.78	3.86	4.14	4.51	5.80	6.54	7.44

Data, Reis & Chandler, Inc.

Utility Operating Revenues Increase 8% in October

Electric operating revenues of the larger privately owned electric utilities in the United States in October were 8.0% above those for the same month a year ago, according to preliminary figures announced by the Federal Power Commission. Gross income was down 4.0% and net income decreased 9.7% for the month.

Revenue deductions of $367,369,000 (including operating expenses, depreciation, and taxes) were 11.1% higher than those for October, 1950.

October revenues amounted to $442,926,000 compared with $409,953,000 for October last year.

Gross income, including other utility operating income, amounted to $80,407,000. Net income dropped from $60,689,000 for October, 1950, to a figure of $54,791,000 for October, 1951.

Stock Acquisition Plan of Kansas City P&L OK'd

First step in the merger of Eastern Kansas Utilities, Inc, Fort Scott, Kan., with Kansas City (Mo.) Power & Light Co has been authorized by the Federal Power Commission in Washington.

FPC specifically has approved Kansas City's proposal to acquire 126,933 shares of no par value common stock of Eastern Kansas as the initial step in the merger.

Kansas City Power plans to purchase all shares of the stock tendered within 45 days of its offer, provided two-thirds of the stock is tendered. If this amount is purchased, Kansas City Power will then take steps to acquire Eastern Kansas' property and assets either by purchase, merger, or other means.

Present rates of Eastern Kansas are higher than Kansas City Power, and it is claimed that integration of the properties will result in improved service and lower rates to customers of the properties.

If the deal goes through, Kansas City Power then proposes to sell a portion of the facilities acquired to Kansas Gas & Electric Co, Wichita. This integration would also be favorable to customers, the application for FPC approval says.

FINANCIAL BRIEFS

Idaho Power Co has asked Federal Power Commission approval to borrow up to $15 million from banks during the first seven months of 1952 . . . **Central Power & Light Co** has requested Securities and Exchange Commission approval to purchase from W. C. Jackson, Jr, for the sum of $215,000, the electric and ice properties and assets located in and in the vicinity of the Town of Port Aransas, Nueces County, Tex.

Detroit Edison Co directors declared a quarterly dividend of 35¢ a share, payable Jan. 15, 1952, to stockholders of record Dec. 28, 1951. This is an increase of 5¢ a share over the dividend paid quarterly since 1942.

Fall River Electric Light Co has asked SEC approval to issue up to $1 million notes to First National Bank of Boston . . . **Jersey Central Power & Light Co** has received SEC approval to issue up to $3.1 million notes by Nov. 1, 1952 . . . **American Gas & Electric Co** has received SEC approval to borrow up to $6 million from banks by July 1, 1952.

Missouri Public Service Commission has approved the merger of the Missouri Public Service Co and the Missouri Gas & Electric Co. Stockholders of the two companies will meet Dec. 28 to vote on the proposed merger.

West Penn Electric Co is planning to sell about $11.5 million additional common stock to stockholders on 1-for-8 basis during the first quarter of 1952. West Penn Power Co is contemplating selling about $11.5 million bonds early in the second quarter of 1952.

Electric Utility Financing

Company and Description	Amount of Offering (000)	Offering Price	Yield at Price to Public
WEEK OF DECEMBER 13-19			
Bonds			
Niagara Mohawk Power—gen mtg 3⅛% 1981	$15,000	101.80%	3.28%
Preferred Stock			
Iowa Southern Utilities—100,000 sh cum $1.76 $30 par conv	$3,000	$32.25	5.45%
Common Stock			
Niagara Mohawk Power—1 million sh	$24,250	$24.25	6.60%
Central Maine Power—315,146 sh (being offered to 6% holders on 5-for-7 basis and to common holders on 1-for-7 basis, record Dec. 5 to expire Dec. 17; New England PS, holder of 49% of common waiving its right to subscribe for 150,740 shares of new stock which is being sold publicly)	5,554	$17.625	6.81%
SCHEDULED FOR JANUARY			
Bonds			Bid Date
Seattle, Wash.—municipal light and power rev, 962-1986	$28,000		Jan. 8
Philadelphia Electric—1st and ref mtg 1982	35,000		*Jan. 9
Indiana & Michigan Electric—1st mtg 1982	17,000		Jan. 22
Indiana & Michigan Electric—serial notes 1956-1967	6,000		Jan. 22
Preferred Stock			
Florida Power Corp—51,550 sh $100 par cum conv	5,155		

*To be offered by Drexel & Co and Morgan Stanley & Co group, underwriters.

IN THE INDUSTRY

FISCHER BLACK

There was no celebration early this month when the Defense Electric Power Administration reached its first birthday. This significant occasion could well have been observed by Depa's hard-working staff and by all producers of power, both public and private, everywhere in these United States. For Depa's contributions to the industry have been many; its efforts to secure a firm and respected position for power producers in the vast mobilization program have met with success.

Lack of Personnel an Early Handicap

Depa's main difficulty in its early days was the reluctance of power suppliers to release important personnel for service at Washington. There was even difficulty in finding a top man from the privately owned companies to take over the important post of administrator. Finally, Clifford B. McManus, president of the Southern Co, consented to assume this post. When the period for which he had agreed to serve ended, he resigned and was succeeded by a deputy, James F. Fairman, a vice president of Consolidated Edison Co. New York, and a former president of the American Institute of Electrical Engineers.

But despite the difficulties of finding personnel and overcoming the many other difficulties which arise in a government agency born in an emergency, Depa has many accomplishments to its credit in its first year of life. Administrator Fairman recently summed them up saying, Depa:

1. Set up as claimant agent for some 4,000 electric utilities an orderly method of distributing aluminum, copper, and steel to the utilities for defense construction projects long prior to the adoption of the Controlled Materials Plan.
2. Perfected arrangement with Rural Electrification Administration for allocating scarce materials to the electric cooperatives.
3. Established expediting assistance for electric utilities in need of special priorities aid.
4. Obtained from the utilities information on their material requirements.

Pushed Accelerated Amortization

5. Developed criteria with the Defense Production Administration for the review of applications by electric utilities for certificates of necessity for accelerated amortization, resulting to date in the approval by DPA of 72 projects with an estimated power capacity of 4,127,400 kw.
6. Conducted studies in all major power systems and interconnected networks to ascertain prospective power loads and scheduled power expansion projects.
7. Sponsored conservation methods in the use of scarce materials by electric utilities as well as vigorous scrap drives within the industry.
8. Expedited installation of new capacity in sections threatened with power shortages.
9. Established flexible conservation measures in the Pacific Northwest for the use of power during the winter season of low-water conditions. In this Depa had the cooperation of other defense and federal agencies as well as of state and local authorities and the utilities affected.

These indeed are accomplishments of which Fairman can be proud. He and his staff are doing a job for the industry in a way the job should be done.

TECHNICAL NOTES

ARCHER E. KNOWLTON

Corona in arresters may result in nitrous oxide and ozone and thence corrode the metal parts.

Switching of capacitors has been the practice on about one-third of the installations; half are manual and a third automatic on voltage.

Generators connected to a common bus are not as readily capable of ground-fault protection as those connected unit-wise to the outgoing transformers.

Differentiation of moisture from other insulation defects is possible in testing control cables if 500 v d.c is applied with negative to conductors and positive to sheath.

Insulators surface-treated with silicone fluids have 10% to 20% higher flashover under standard precipitation and 20% to 90% higher under mist than identical insulators untreated.

Two transformers per generator each to the sections of a sectionalized bus provides enlarged reactance, limits voltage disturbances and reduces short circuit duty at the step down transmission-line substations as well as at the generating station.

Neoprene sheath has been estimated to have ten times the life of lead and is easier to pull into cable ducts.

Artificial contamination of an insulator surface in the laboratory seems to show poor correlation with the performance under actual contamination in field service.

Noise from a transformer may be propagated, despite brick wall enclosure, if the air is temperature-stratified, if there is wind or fog and if the ground acts as a reflector.

Communication inadequacy was attributed with most of the 1¾ hours it took to completely restore service on a system after a defective relay started a chain collapse.

Radio-power supply should be provided by an emergency generator set if there is risk that station auxiliary service can fail.

Grounded-neutral wye systems impose lower stresses on insulation than ungrounded systems.

Paralleling of feeders is adversely affected if they are subjected to differing phase-angle shifts by the action of delta-connected voltage regulators.

NEWS ABOUT PEOPLE

Ebasco Services Names Paul Gourdon to New Post

(See Front Cover)

Paul E. Gourdon, chief mechanical engineer of Ebasco Services, Inc, New York, for the past 12 years, has been appointed consulting mechanical engineer for the firm. He succeeds Louis Elliott who has been made consulting power engineer.

LOUIS ELLIOTT

F. A. RITCHINGS

In another promotion, Frank A. Ritchings was named chief mechanical engineer to succeed Gourdon.

Gourdon joined Ebasco in 1917 as a mechanical engineer and has served in various capacities since then. After his appointment in 1939 as chief mechanical engineer, he became responsible for all mechanical design work, including steam and diesel electric stations, manufactured gas plants, gas compressor stations, industrial applications, and other special equipment installations.

Elliott started with the company in 1912 as a mechanical-general engineer assigned to the western companies of Electric Bond & Share system. In 1923 he was appointed consulting mechanical engineer. The new post will permit him to devote his full time to special problems in the power development field.

After joining the Ebasco organization in 1937 as a mechanical engineer, Ritchings was engaged continuously in power plant design except when he served with the Navy during World War II. When he became project and supervising engineer in 1946, he handled the design assignments of many modern generating plant installations.

•

William H. Merrifield, assistant to the advertising manager of West Penn Power Co since 1945, has been promoted to assistant director of public relations. **Mrs. Margaret P. Bolander,** advertising assistant, was named advertising manager and **Arthur R. Hailsley** assistant advertising manager. Merrifield joined West Penn in 1937 as an advertising assistant and is managing editor of the company's employee magazine, "West Penn News."

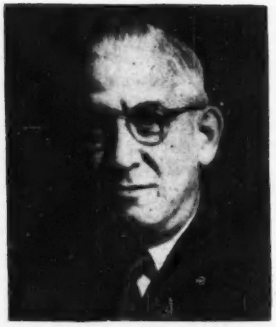
David G. Christie has been appointed director of employee services of Sylvania Electric Products, Inc. With the company since 1940, Christie has served most recently as manager of compensation development. He will have responsibility for salary administration, policy development, employee benefits, and industrial engineering.

Earl R. Narum, application engineer in the substation section of Allis-Chalmers Manufacturing Co's power department, has been assigned to the Detroit district office of the company's general machinery division. Narum started with A-C in 1947.

Rochester G&E Promotes W. F. Dewey and 2 Others

William F. Dewey, engineering superintendent of Rochester (N. Y.) Gas & Electric Corp since 1944, has been appointed chief engineer. He succeeds John E. Fredericks who has retired after 21 years of service with Rochester G&E.

The company also named James A. McConnell assistant chief engineer and John A. Baker superintendent of construction and general maintenance.



W. F. DEWEY

Dewey started with Rochester G&E in 1925 as an engineer and draftsman in the gas department and three years later was transferred to the engineering department. In his new position, Dewey will be responsible for all general engineering and construction work.

With the company since 1925, McConnell started as an engineer and draftsman. After filling various posts he was made technical engineer last October.

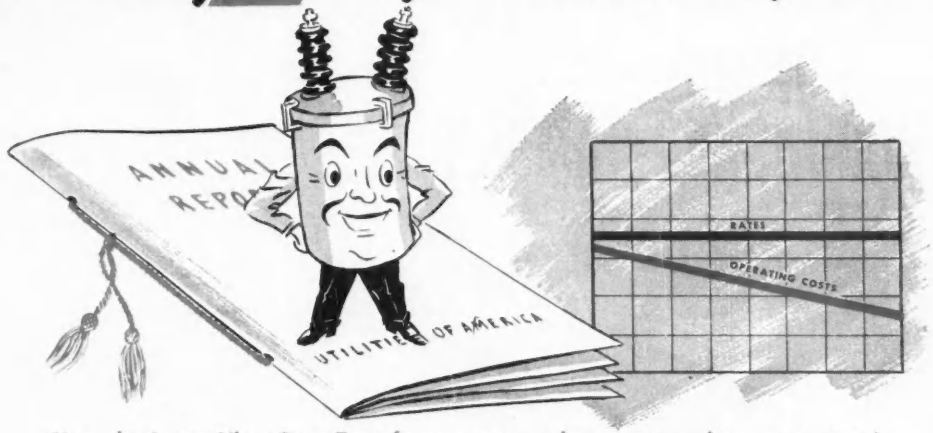
Baker, superintendent of maintenance, joined Rochester G&E in 1918 as a carpenter in general maintenance. He served in various capacities before becoming head of the department.

Fredericks, who began his career with the Rochester utility in 1930, has supervised some of the company's biggest engineering and construction jobs, including enlargement and modernization of the company's electric

(Continued on page 27)

MOLONEY *HiperCore* TRANSFORMERS

will look good on your Annual Report!



Yes, that's so. HiperCore Transformers can reduce your maintenance costs!

For instance

1. Peak overloads which produce high winding temperatures and greatly shorten the life of ordinary transformers are readily handled by HiperCore Transformers without damage. This is a direct result of the wound core design which permits a smaller core and coil mass, and therefore a lower temperature gradient.

2. Short circuits which cause shifting and distortion of transformer windings seriously damage winding insulation. HiperCore coils are securely braced and made mechanically rigid with heat-curing bonding materials to withstand short circuit conditions which would send most transformers to the repair shop.

3. Poor voltage regulation during short-time overload periods results from high transformer impedance. Low impedance has been achieved on HiperCore Transformers by means of the small core size and the resulting shorter coil winding. This means that HiperCore Transformers can often deliver the load with satisfactory voltage regulation where an ordinary transformer of the same Kva size might give such poor regulation as to require its removal and a larger size installed.

You can have

Conventional Type LL HiperCore Transformers equipped with side-wall-mounted high and low voltage bushings in all standard voltages below 5,000 volts.

Conventional Type CL-1 HiperCore Transformers equipped with one cover mounted high voltage bushing for use on grounded neutral systems.

Conventional Type CL-2 HiperCore Transformers with two cover mounted bushings in standard sizes for use on either Delta or Wye systems, in single or three-phase banks.

Or HiperCore CSP Transformers in identical ratings but fully equipped with self-protecting equipment with no additional protective equipment needed.

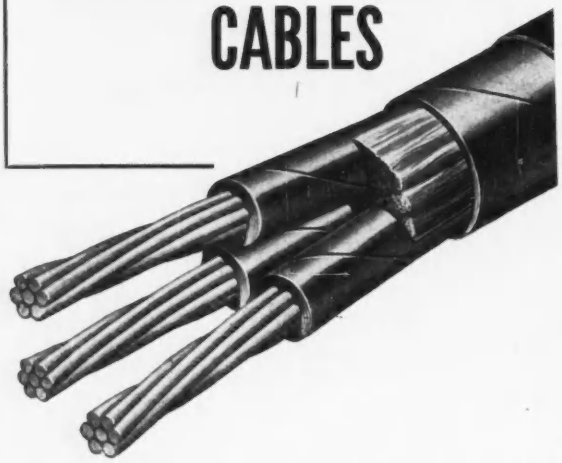
MOLONEY ELECTRIC COMPANY

Manufacturers of Power Transformers • Distribution Transformers • Load Ratio Control Transformers • Step Voltage Regulators • Unit Substations

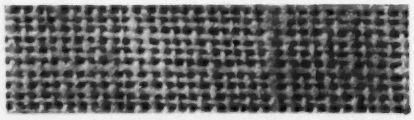
SALES OFFICES IN ALL PRINCIPAL CITIES • FACTORIES AT ST. LOUIS, MO. AND TORONTO, ONT., CANADA

"No. 1799" means high quality

General Electric VARNISHED-CAMBRIC CABLES



1. Special untreated cotton cloth utilized in the manufacture of G-E No. 1799 varnished-cambric insulation.



2. Enlarged section of cloth. The large holes enable the cloth to absorb the maximum amount of varnish.

3. Finished varnished-cambric tape completely impregnated with varnish, provides a high degree of insulation.

That's right, when you specify General Electric cables with the famous G-E No. 1799 varnished-cambric insulation, *you know you get high quality* in every foot—*uniformity* in the thickness and strength of the insulating wall . . . high dielectric strength . . . excellent resistance to high operating temperatures.

Three factors—resulting from nearly 50 years of General Electric research and development—are primarily responsible for the excellent electrical qualities of G-E No. 1799 varnished-cambric insulation. First, a special cotton cloth, which the varnish penetrates easily and saturates thoroughly. Second, General Electric's own tough, yet flexible, varnish. Third, the careful baking processes used in the application of varnish to cloth.

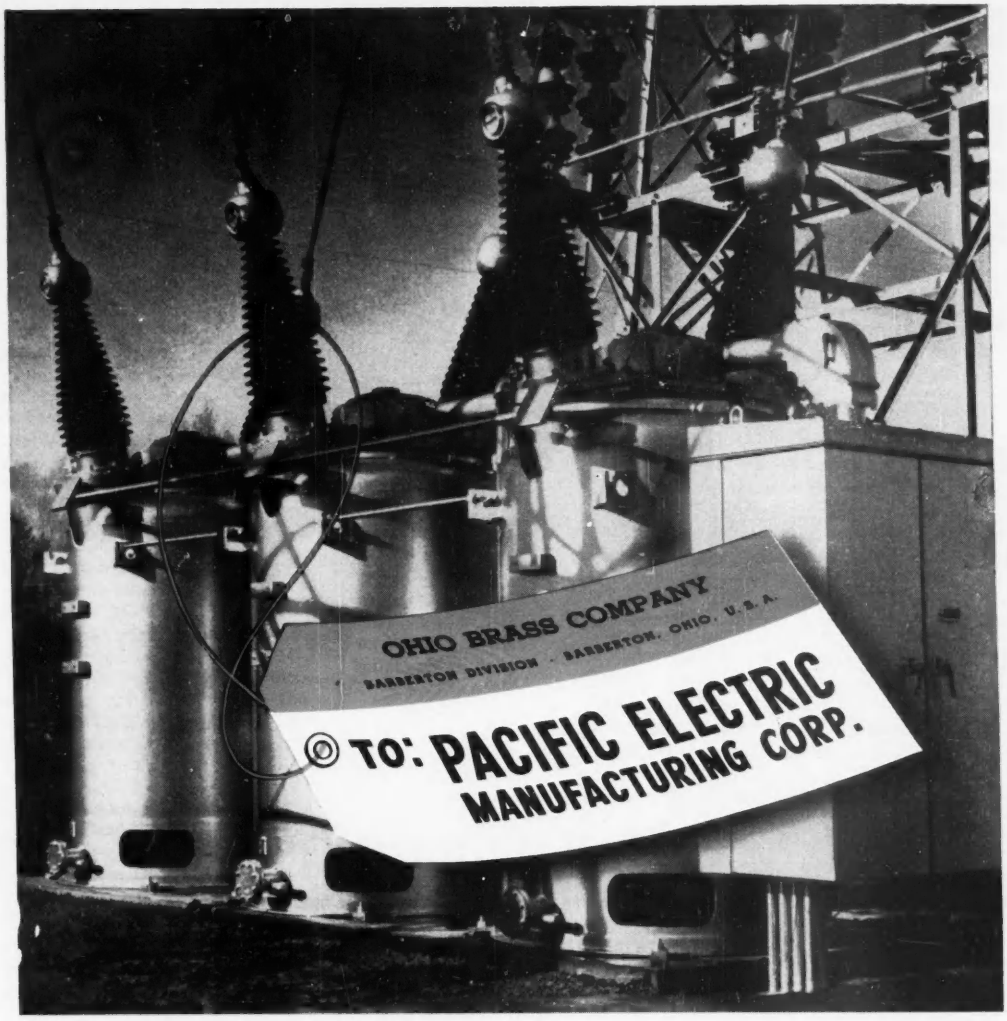
The ability of varnished-cambric cable to withstand high conductor temperatures continuously can be judged by its being able to remain pliable when subjected to extreme temperatures over long periods of time. The performance of G-E No. 1799 varnished-cambric insulation under rigorous conditions proves that many years of uninterrupted service can be realized from this type of cable construction.

G-E varnished-cambric cables are available in 3 basic types:

BRAIDED—for power and control circuits, exposed or installed in conduit in dry locations; and for transformer and apparatus power leads. **INTERLOCKED ARMOR** — for overhead distribution in power plants, factories, and the like. This cable requires no raceways, permits speedy installations. **LEADED**—for generator leads and power wiring overhead or in underground ducts. Ideal for heavy loads in wet or dry locations.

For information on the complete line of General Electric varnished-cambric insulated cables, see your local G-E Construction Materials distributor or district office. Section W4-1227, Construction Materials Division, General Electric Company, Bridgeport 2, Connecticut.

GENERAL ELECTRIC



One of several 115-kv oil circuit breakers supplied to a large Western system by the Pacific Electric Mfg. Corporation. According to its builder . . . "each entrance bushing of this circuit breaker is mounted on an adapter flange which has a spherical-ring undersurface that rests upon a similar surface of the transformer-pocket flange. This greatly facilitates field installation of the bushings and contact structures attached to them because selective tightening of the flange bolts will shift the bottom of the bushing to any desired position. Other Pacific Electric features include closing by stored energy in motor-compressed springs, improved arc extinguishment," . . . And

Ohio Brass

MANSFIELD · OHIO

4147-M

O-B BUSHINGS

ONE OF THE FINEST COMPONENTS OF ANY CIRCUIT BREAKER

A HOLIDAY MEMORY . . .

Time was when Christmas trees were lighted with wax or tallow candles. It took time to put them on the tree . . . each had to be painstakingly located to assure safety against fire. They had to be lighted one at a time . . . and so carefully, too!

Today . . . the candle on the tree is but a holiday memory. In thousands upon thousands of homes the Christmas tree is adorned in colorful array at the mere flick of a switch . . . an accomplishment made possible by modern electric distribution systems.

G & W has pioneered in the development and manufacture of many devices for safe, economical electric distribution . . . devices that are in service all over the nation, helping contribute to happy holiday enjoyment. And while G & W devices in service are contributing to Christmas enjoyment, we at G & W wish all of our friends and associates in the industry a joyous holiday season.

G&W ELECTRIC SPECIALTY CO.

7780 DANTE AVENUE • CHICAGO 19, ILLINOIS

News About People

(*Continued from page* 22)

generating Station No. 3 and its newest generating plant, Russell Station, on Lake Ontario, and also a new hydro plant now being built on the Genesee River. He will continue to serve the company as an engineering consultant.

John L. Fuller, technical coordinator in Reliance Electric & Engineering Co's engineering department since 1950, has been promoted to the newly created post of manager of research and technical services. He joined Reliance in 1936 and for five years served as a junior engineer. In 1941 Fuller was made experimental engineer and six years later became manager of large motors engineering.

Prof Malcolm S. McIlroy has been appointed assistant director of the School of Electrical Engineering at Cornell University. McIlroy, a member of the Cornell faculty since 1947, formerly was with the General Electric Co and the Central Hudson Gas & Electric Corp, Poughkeepsie, N. Y. He also taught at the Massachusetts Institute of Technology.

Joseph H. Cox, supervisor of electrical engineering and quality control for Westinghouse Electric Corp's Sunnyvale (Calif.) plant, has been promoted to engineering manager of the plant. Cox, designer of the Ignitron rectifier, joined Westinghouse as a service engineer in 1923.

Eugene M. Ball, manager of the dealer sales promotion department of Commonwealth Edison Co, Chicago, since 1942, has retired after 26 years' service with the utility. In 1925 he started with the Edison company. Previously he worked for Montana Power Co.

Ladislas Goldstein, Federal Telecommunications Laboratory, Nutley, N. J., has been appointed research professor of electrical engineering of the engineering experiment station at the University of Illinois.

Victor J. Daniel, Jr, has been made the new industries representative of Mississippi Power Co. Daniel formerly worked in the company's commercial department.

Virginias Association Elects Sprinkle President

H. O. Sprinkle, manager of Monongahela Power Co's operations department at Fairmont, W. Va., headquarters, has been elected president of

H. O. SPRINKLE

the Public Utilities Association of the Virginias. He succeeds R. N. Jewell of the Wheeling (W. Va.) Electric Co.

Sprinkle entered the utility field in 1923 when he joined West Penn Power Co at Pittsburgh. In 1930 he went to Monongahela as general superintendent in the operating and engineering department. In 1937 he was appointed to his present position.

During World War II, he served as chief of the west central power supply unit of the Office of War Utilities.

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Everett R. Burkhardt has been appointed chief engineer of the Holyoke (Mass.) Water Power Co. With the company since 1923, he has been identified with many phases of its power plant development, culminating in the post of supervisory engineer on the construction of the new Hadley Falls hydroelectric station.

OBITUARY

David H. Foote

David H. Foote, 90, former vice president and secretary-treasurer of Pacific Gas & Electric Co, died Dec. 8, at San Francisco. He entered the utility field in 1903 as assistant secretary and assistant treasurer of the California Gas & Electric Corp, which was merged with the San Francisco Gas & Electric Co in 1906 to form PG&E.

Foote was made a vice president of PG&E in 1912, a director in 1914, vice president and secretary in 1922, and vice president and secretary-treasurer in 1927. He retired in 1943.

•

Paul F. Helm, 64, retired executive of Indianapolis Power & Light Co, was killed Dec. 3 in an accident near Dana, Ind. Helm started his utility career with Interstate (Ind.) Public Service Co in 1909. In 1918 he joined Indianapolis P&L as a research engineer. He was made superintendent in 1927, chief designing engineering in 1928, assistant to the vice president in charge of operation in 1941, and assistant to the vice president in charge of operation engineering in 1945. He retired Nov. 1, 1951.

Clephane W. B. Richardson, assistant engineer in the consumer service division of the Hydro-Electric Power Commission of Ontario, Can., died recently at Toronto. Associated with the municipal engineering department of Ontario Hydro since 1922, Richardson also served as distribution engineer for the commission in the Niagara region.

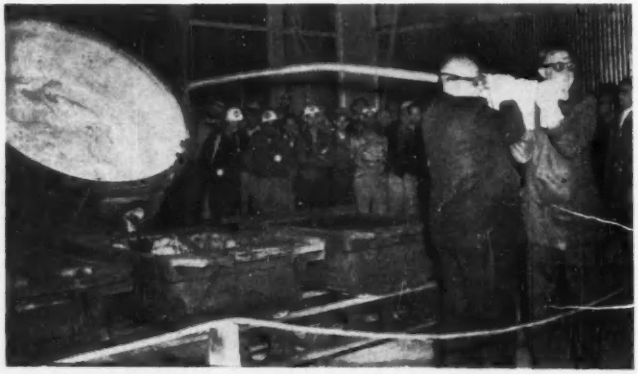
H. E. Poynter, 66, who retired as Henderson, Tex., manager of the Southwestern Gas & Electric Co, Shreveport, La., last year, died Dec. 6 at Terrell, Tex. In 1931 he became manager for the utility at Gladewater and was transferred to Henderson as manager in 1934.

William H. Shuck, 63, assistant supervisor of operations for the southern division of Duquesne Light Co, died Dec. 6. He had been with the company for 45 years.

E. S. Kessler, eastern division manager and plant manager at Gary, Ind., for Pacific Electric Manufacturing Corp since 1929, died recently. He started with the company in 1925.

Chester W. Hodgson, 49, Vermilion, Ohio, manager of the Ohio Edison Co for 18 years, died Nov. 29 of injuries received in an automobile accident.

MANUFACTURERS and MARKETS



START OPERATIONS—Henry J. Kaiser (left), president of Kaiser Aluminum & Chemical Corp, and Charles E. Wilson, Director of Defense Mobilization, are shown pouring the first ladle of metal at recent dedication ceremony of the company's new $150-million aluminum reduction plant at Chalmette, near New Orleans, La. Plant is scheduled to turn out about 400 million lb of aluminum a year by 1953

GE Sees Increased Use of Alternative Materials

Wages and salaries will continue their upward trend started in 1946, prices will reflect these increases, defense work will account for 30 to 35% of the company's business, after May all appliances and consumers goods except television receivers will be on an allotment basis, and there will be a constantly rising increase in use of alternative materials.

This is the 1952 picture of the activities and business of General Electric Co. It was presented by Pres Ralph J. Cordiner at the company's annual year-end press conference last week in New York.

Copper is now pacing the company's business, he said. It is more important than steel and aluminum. More sheet steel is now available, but alloy and structural steels are still hard to get.

To save scarce materials the company has adopted an extensive program to find alternative materials. Many of these have worked out so well that the company has given up all thought of returning to the use of the replaced materials.

GE expects to be in production soon on one or two ratings of distribution transformers with aluminum coils. Other products where aluminum is replacing copper are motors, ballasts, and bus and connecting bars for switchgear.

Using the return of guarantee slips as a basis, the company has noted an increase in retail appliance sales in recent weeks. A continuance of this trend would make it necessary for the company to allocate most appliances. If materials are available and alternative materials work out, the company expects 1952 appliance output to be 75% of 1951.

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Refined Copper Stocks Decreased in November

Stocks of refined copper held in the United States by members of the Copper Institute at the end of November totaled 68,160 tons, a decrease of 10,032 from the 78,192 tons held by producers at the end of October.

During November deliveries to domestic fabricators declined slightly to 123,746 tons, compared with 125,286 tons for the previous month. These figures include tonnages delivered from government stocks.

Refined production also dropped slightly during November to 103,614 tons as against 104,148 tons for October.

Outside the United States refined stocks amounted to 166,640 tons on Nov. 30, a decrease of 3,837 from the 170,477 tons held on Oct. 31. November deliveries increased during November to 95,170 tons from 89,495 in October but refined production fell to 103,141 tons from 115,825.

•

Westinghouse to Supply 3 Units to Manila Utility

The Manila (Philippines) Electric Co has placed an order for three power units, with capacities totaling 20,000 kw, with the Westinghouse Electric International Co for installation at its Blaisdell station.

The three units, two 5,000-kw turbine-generator units and one 10,000-kw unit, will more than double Blaisdell's present 16,500-kw capacity. In addition to the three power units, Westinghouse will supply three boilers, each with a capacity of 100,000 lb of steam per hour, and will supervise the entire installation.

Westinghouse will build the equipment at its plants in East Pittsburgh and South Philadelphia, Pa., and at Newark, N .J.

•

Minneapolis-Honeywell Division Offers Courses

The first courses in instrument maintenance and repair to be held in 1952 by the Brown Instruments Division of Minneapolis-Honeywell Regulator Co are scheduled to start Jan. 7. They will be held at the Brown School at Philadelphia.

A large part of the six months of training will be held for the benefit of Honeywell customers men. Other periods will be for the training of Honeywell men who will be assigned to field sales and service staffs upon successful completion of the courses.

The schedule will be divided into

study periods of varying lengths, including a 13-weeks comprehensive course that will extend from Feb. 11 through May 9. Other courses will be held from Jan. 7 to June 27.

Included in the schedule will be studies in pyrometry and electronic potentiometers, pneumatic control and transmission, flow meters, thermometers, pressure gauges and hygrometers, millivoltmeter type pyrometers, electrically operated automatic control. Moist-o-Graphs, tachometers, resistance thermometers and CO_2 analygraphs.

MANUFACTURING BRIEFS

Westinghouse Electric Supply Co has opened a new office and warehouse in Albuquerque, N. M., to handle increased business resulting from atomic projects in the area. G. M. DeKraker, formerly manager at Lubbock, Tex., will hold the same position at Albuquerque. The new Wesco office, which will handle New Mexico sales and distribution for electrical apparatus, home appliances, and supplies, will be housed temporarily in a 9,000 sq ft one-story structure.

Production of primary aluminum in the United States during October totaled 145,293,592 lb, the Aluminum Association has reported. October output topped September production by 6,436,062 lb.

SALES ASSIGNMENTS

COMPANY STAFFS

Westinghouse Electric Corp has appointed Russell N. Chapman New England District apparatus and supply sales manager. Chapman has been manager of the company's branch at Providence, R. I.

Link-Belt Co has appointed William J. Brinkworth its representative for distributor sales in its southwestern division. His headquarters will be at the company's plant in Houston, Tex.

Metal Prices
Dec. 17, 1951

COPPER, Conn., V., lb.	$ .24½
LEAD, N. Y., lb.	.19
ZINC, prime Western, E. St. Louis, lb.	.19½
TIN, Straits, qual. N. Y., lb.	1.03
ALUMINUM, ingot, base price	.19
NICKEL, base price	.56½
STEEL, billets, Pitts., ton	56.00
STEEL, scrap, No. 1 heavy, Pitts., ton	45.00

NEW ELECTRICAL CONSTRUCTION

A weekly selection of U. S. electrical construction projects announced by private and government utility systems involving more than $70,000. Also listed are major industrial and construction jobs where electrical work is indicated or implied

UTILITIES

Proposed Construction

Ariz., Phoenix—City, night lighting system at Airfield. $100,000.

Ark., Hope—City, electric plant $3,000,000. Burns & McDonnell Eng. Co., 95 and Troost Sts., Kansas City, Mo., consult engr.

Calif., San Diego—State Div. Architecture, P. Wks. Bldg., Sacramento, (1) mechanical (2) electrical services partial site development, San Diego State College.

Colo., Boulder—Atomic Energy Comn., Sante Fe Operations Office, P.O. Box 5400, Albuquerque, N. M., electrical distr. and fence and street lighting systems, protective alarm and communications systems. $100,000-$150,000. The Austin Co., 1300 Glenarm Pl., Denver, Colo., archt. and engr.

Fla., Tampa—U. S. Eng., P. O. Box 4970, Jacksonville, armament-electronics repair shop, warehouse and secure storage bldgs., MacDill Air Force Base, about 4 mi. southwest of Tampa, Hillsborough Co., Serial No. Eng 08-123-52-86.

Ga., Valdosta—U. S. Eng., Post Office Bldg., Savannah, radio and radar shops at Moody Air Force Base, Eng-09-133-52-41.

Ia., Cedar Rapids—L. F. M. Company, Atchison, Kan., electric steel foundry. $500,000.

Mass., Danvers—State Dpt. Mental Health, 15 Ashburton Pl., Boston, power plant imprvs., State Hospital. $310,000. D. D. Eames, 6 Granview Rd., Arlington, consult. engr.

Minn., Austin—City Bd. Water, Electric, Gas & Power Comn., W. D. Dunlap, secy., municipal light plant addn., install turbine, $900,000. D. W. Edeskuty, 1418 Foshay Tower, Minneapolis, consult. engr.

Nebraska, Colorado and Kansas—Bureau Reclamation, Dpt. Interior, Bldg. 53, Denver Federal Center, Denver, Colo., furnishing, del. f. o. b. cars shipping point or f. o. b. cars Indianola, Neb., one lot high-frequency radio equip. each for Indianola, Neb., Bonny Bluff Dam, and Superior, Neb., one lot very high-frequency radio equipment each for Indianola, Neb.; Enders Dam, Trenton Dam, Medicine Creek Dam, Superior, Neb.; Cambridge Division Dam and Superior-Courtland Diversion Dam; 18 mobile very high-frequency radio communication assemblies; one lot mobile very high-frequency radio equip. for installation in an aircraft, for Kansas River Dist., Missouri River Basin Proj., Inv. No. DS-3600.

Nebraska—Wheat Belt, Electric Membership Assn., Sidney, 487 mi. rural distr. lines, Cheyenne, Deuel, Morrill and Garden Counties. $600,000. Flora Eng. Co., 1717 E. Colfax Ave., Denver, Colo., consult. engr.

Neb., Ogallala—Good-All Electric Mfg. Co., Ogallala, plant bldg. $225,000.

Oregon—U. S. Eng., 628 Pittock Block, Portland, Zone 5, mfg., del. f.o.b. railroad cars, Gates, main control switchboard, panels with supervisory control equip. and the services of a supervising erector for approx. 30 days, Serial No. CIVENG 35-026-52-121.

Pa., Altoona—Sylvania Electric Products Co., 811 27 St., brick, block plant addn. $100,000.

South Dakota—Bureau Reclamation, Dpt. Interior, Huron, Wall Sub-station, Spec. No. DC 3579; Philip Sub-station, Spec. No. DC-3582, Transmission Div., Missouri River Basin Proj.

South Dakota—Bureau Reclamation, Dpt. Interior, Huron, Wicksville sub-station, Spec. DC 3580; Midland sub-station, Spec. DC 3581, Transmission Div., Missouri River Basin Proj.

Tex., Crosbyton—City, lighting plant improvs. $100,000. James O. Bishop, 908 Travis Bldg., San Antonio, consult. engr.

Wyoming-Montana—Bureau Reclamation, Dpt. Interior, Cody, Wyo., Lovell-Yellowtail 115-kilovolt transmission line, Transmission Division, Missouri River Basin Proj., Spec. DC 3555.

B. C., Vancouver—A. J. Sutton, 425 Carrall St., 4 story, 120x130 ft. rein.-con. substation, for B. C. Electric, 425 Carrall St., $750,000. Plans deposit $50. Sharp & Thompson, Berwick, Pratt, 1553 Robson St., archts.

Low Bidders & Contracts Awarded

Ga., Savannah—Cleveland Electric Co., Manning, Jacksonville, Fla. LB, $144,097, electrical sub-station and distr. sys. at Hunter Air Force Base, U. S. Eng., Post Office Bldg., Savannah, Ga. Bids Nov. 27.

Ia., Rockford—Fairbanks, Morse & Co., 9 and Harney Sts., Omaha, Neb., CA, $77,381, furnishing, installing 700 HP diesel engine generating unit, etc. Bd. Trustees Municipal Electric & Power Plant, Rockford, Ia.

Maryland—Roy Richards Constr. Co., Carrollton, Ga. LB $368,421, transmission line and sub-stations, Charles, St. Marys and Calvert Counties. Southern Maryland Electric Co-operative, Hughesville, Md. Bids Nov. 15.

Mich, Crystal Falls—C. R. Meyer & Sons Co., 50 State St., Oshkosh, Wis. CA $1,160,342, superstructure for power house at Hydro-electric plant. Wisconsin-Michigan Power Co., Appleton, Wis. Bids Nov. 12, awarded Nov. 16.

Montana—Montgomery Electric Co., 2375 N. W. Thurman St., Portland, Ore. CA $369,787. 75.8 mi. Spokane-Hot Springs 230 kv line, Schedule 4, Inv. 6156, Sanders Co. Bonnesville Power Admin., 827 N. E. Oregon St., Portland, Ore. Bids Nov. 20, awarded Nov. 30.

Oklahoma—Alpha Constr. Co., Tulane Bldg., Tulsa, Okla., CA. $92,325, est. $100,000. 30 mi. 69 kv transmission line, Sequoyah Co. K. A. M. O. Electric Cooperative, Vinita, Okla., W. R. Holway, 302 E. 18 St., Tulsa, Okla., engr.

Pa., Phila.—United Building Constr. Co., 845 N. 19 St., Phila., Pa., CA. $584,000. Locust St. Subway (station completion, cable and lighting sys.). Dpt. City Transit, City Hall Annex, Howard Hipwell, c/o owner, ch. engr. Bids Sept. 5.

Texas—West Texas Utilities Co., Abilene, Tex., Force Account, $100,000. construction of miles above-ground electric power lines, Big Lake area.

Tex., Eagle Pass.—Frozen Food Products Co., Eagle Pass, Tex. Own Forces. $90,000. frozen food products plant unit.

Wisconsin—Wisconsin Electric Power Co., 231 W. Michigan St., Milwaukee 3, Wis., Own Forces, $190,635, 3.35 mi. transmission lines and sub-station, Kenosha, Co. E. J. Archambault, c/o owner, engr.

Alaska, Curry—Valle-Sommers Constr. Co., 407 3 Ave. W., Seattle, Wash., CA. $104,448, 25x55 ft. power plant addn. The Alaska Railroad, Dpt. Interior, Anchorage, Alaska. Bids Nov. 27.

INDUSTRIAL, COMMERCIAL & PUBLIC BUILDINGS

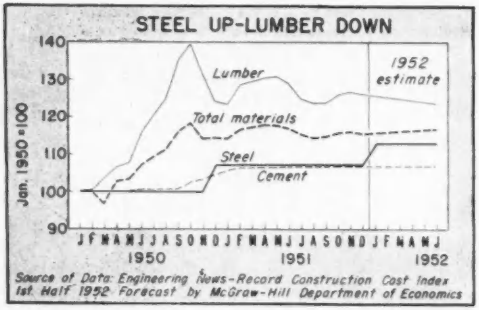
Proposed Construction

Ill., Waukegan—Victory Memorial Hospital, 1324 N. Sheridan St., plans by Schmidt, Garden & Erikson, 104 S. Michigan Ave., Chicago, Zone 3, hospital addn., alterations, $1,000,000.

Ia., Des Moines—Bd. Educ., 629 3 St., Des Moines, North High School, $3,793,755; administration bldg., $1,006,950; plans by Wetherell & Harrison, 506 Shops Bldg., East High School addn., $928,381; Nathan Weeks Junior High School, $1,283,000; Callanan Junior High Addn. $362,859.

Nev., Henderson—Hercules Powder Co., Delaware Trust bldg., Wilmington, Del. insecticide plant. $3,000,000.

Electrical Business Outlook



STEEL PRICE INCREASE, which the coming boost in wages will force, will more than offset any drop in lumber prices

Construction Costs Will Rise in 1952

New construction will cost more next year—just as it has most every year since World War II. Lumber prices are off. But metal prices are still strong. And labor—a key element—is getting still more expensive.

Don't be fooled by the many reports you see of prices dropping. They're mostly farm products, soft goods; residential building materials—not the things that go into utility construction.

Lumber Prices May Go Lower

There has been an important break in lumber prices (chart). And they could go lower in the next month or two. But the big news on materials is that steel prices will soon be boosted, to compensate for the coming wage increase. Our guess is $3.50 to $4 per ton on structurals. And that's enough to boost the average cost of materials—particularly on heavy construction.

Talk of easier steel supply hasn't got much to do with structural steel. There's more sheet and strip steel around because consumer goods companies are cutting back output. They haven't got the copper to go with their steel allotments and aren't picking them up. So gray market prices have vanished.

Steel, Including Structural, Will Cost More

But structurals will be tight for months to come. CMP may straighten out the supply situation enough to eliminate some premium deals. But even that's not sure. And regular mill prices will go up.

The full amount of the steel price increase won't be passed through on fabricated metal products. It can't be under the price control law. But as 1952 goes on, more and more construction and machinery items will be raised in price under various rulings which allow adjustments for higher costs.

No substantial price increases are yet in sight on electrical apparatus, pole line hardware, or wire and cable. But if manufacturers' costs on these items keep moving up in 1952, Congress and OPS will have to give them price relief before the year is over. Manufacturers must get them to stay out of trouble.

It's all part of the creeping inflation which prevails in the metal-working segment of the economy. Prices here didn't whoosh upward in 1951, like lumber or foods, for instance. But they won't come down either. The pressure is slowly, steadily upward, and there are no indications at present that the pressure is lessening.

Construction Wages Will Rise Also

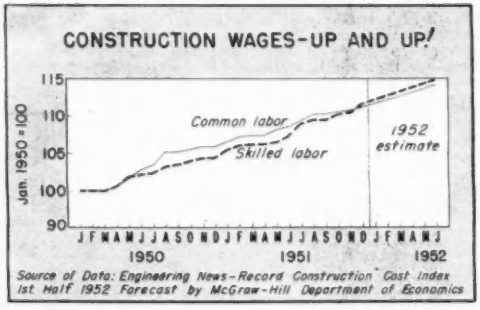
Construction wages (chart below) are also moving up at a steady clip. The average construction wage could move up as much as 5% in 1952 under the government's shifting wage formulas. About a 3% increase seems likely in the first half-year to catch up with living costs.

These are averages. There will be considerable variation in what happens to wages in different regions, and in force account construction or contract construction—all depending on how wages stand now in relation to ceilings and to the cost of living.

Total Rise Will Be 2 to 3%

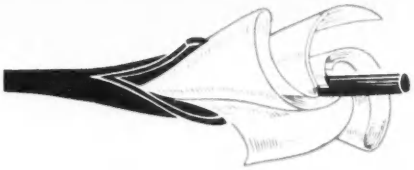
If materials go up 1 or 2% on the average in the first half of 1952—and labor costs are up about 3%—it's easy to see that overall construction costs will show a 2 to 3% rise. And such an increase is enormous to an industry which will spend $3.8 billion in 1952 (EW, Dec. 17, p 75).

If the same trends continue in the second half-year, construction costs will be up 5% a year from now. And if apparatus prices should also rise, the year will really set a high mark in costs. But the thing to watch is labor. If living costs and wages level out after mid-1952, the construction bill won't be so high; but it will still be an amount that few other industries can match.


CONSTRUCTION WAGES-UP AND UP!
Jan. 1950 = 100
115
110
105
100
90
Common labor
Skilled labor
1952 estimate
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J
1950
1951
1952
Source of Data: Engineering News-Record Construction Cost Index
1st Half 1952 Forecast by McGraw-Hill Department of Economics

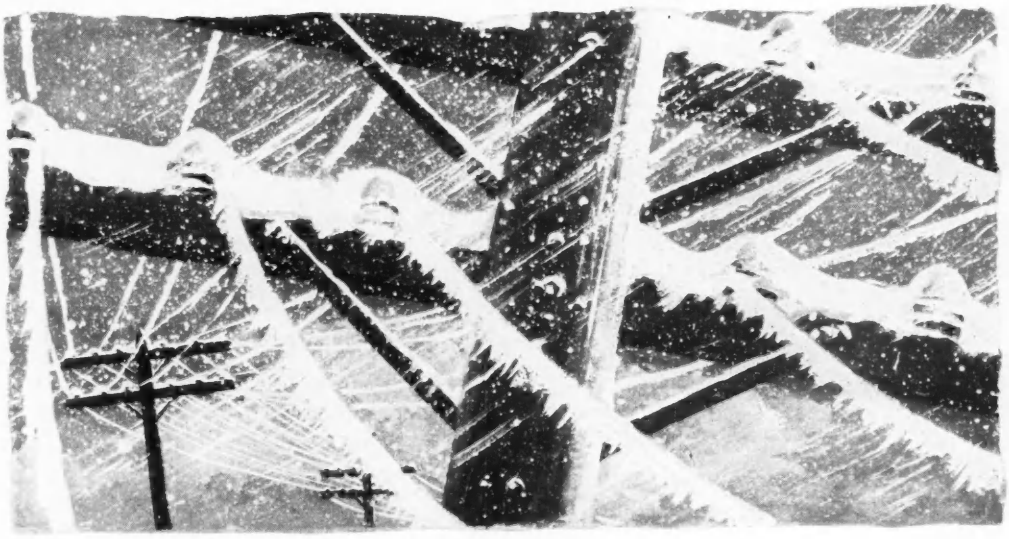
STEADILY CLIMBING WAGES of construction workers make it simply impossible to hold utility construction costs down

install Duraline...



DURALINE* gives longer, better service because of its unique construction — a continuous, interlocked fibrous sheath, thoroughly impregnated with genuine URC saturants, then covered with URC finishers.

and forget about this



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ANACONDA® WIRE AND CABLE

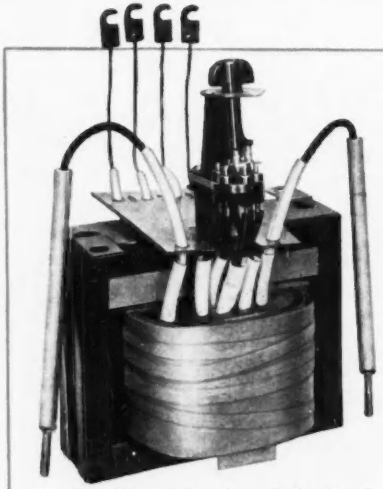
15% Smaller

IN SIZE AND WEIGHT
WITH SAVINGS IN OPERATING COSTS

YOU CAN GET higher flux carrying capacity and lower hysteresis losses with the new *Curvacore* distribution transformer. The new transformer with its redesigned core and other improvements gives better performance though reduced in size and weight 15%.

The core of the *Curvacore* transformer utilizes strips of cold rolled steel, shaped to follow the natural path of the magnetic flux. Steel strips are wound, shaped, annealed and cut into two-turn lengths. Each length is fed through the coil structure and then resumes its original curved shape.

The *Curvacore* transformer can yield real savings in operating costs over the years. Here are the advantages of the new design:



New internally operated tap changer has handle and position indicating dial plate above the oil level.

FORMER FEATURES RETAINED

Where tank wall high voltage bushings are specified, *Curvacore* transformers retain the simplified angle bushings with handy chuck-type connector.

The *Curvacore* transformer tank is *Spra-Bonderized* and then a 3-coat baked-on finish of alkyd-resinous paint is added.

The *Curvacore* transformer is constructed with the same high quality craftsmanship. Each transformer is thoroughly tested electrically and mechanically.

1 EXCITING CURRENT REDUCED BY ONE-HALF
Wound core design provides a more efficient path for the magnetic flux.

2 BETTER RATIO OF COPPER-IRON LOSSES
New core design gives better balanced arrangement of core steel to copper.

3 REGULATION IMPROVED UP TO 15%
Low reactance of design results in lower impedance.

4 THERMAL CAPACITY IMPROVED
Increased cooling area within the windings reduces the copper-to-oil temperature gradient. Improved cooling results in added years of service life.

5 SIZE AND WEIGHT REDUCED BY 15%
The reduction in size and weight makes the *Curvacore* transformer easier and cheaper to handle and to install.

Curvacore TRANSFORMERS

Economies resulting from these features mean all-around savings for your system and make the *Curvacore* transformer a good investment.

The *Curvacore* transformer is now available in ratings of 25 kva and lower. Higher ratings will soon be available.

For more information on the new *Curvacore* distribution transformer, call your local A-C sales office or dealer. Or write Allis-Chalmers, Milwaukee 1, Wis. A-3418

Curvacore is an Allis-Chalmers trademark.

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